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The polar oceans, sea-ice, and atmosphere are a tightly coupled system, where interconnected processes are only poorly represented in climate and Earth system models. Coupled biological, physical and chemical processes drive complex interactions between sea-ice, snow on sea-ice, and the overlying atmosphere. Knowledge of these interactions is key to projecting sea-ice impacts on atmospheric gases and aerosols, and cloud cover over polar oceans, which in turn impact sea-ice melt, freeze-up and biogeochemical activity through nutrient exchange and solar radiation scattering. As the climate and sea-ice at both poles are changing, these core polar processes warrant more focused attention from Earth system scientists.



For a long time, communities that treat individual system components (ocean, sea-ice, snow, atmosphere) were working mostly in parallel, in part because of the inherently disparate spatial and temporal scales of most oceanic and atmospheric in-situ observations. These challenges limit our ability to describe and quantify key processes and develop coupled descriptions for climate and Earth system models. By bringing together the ocean and sea-ice oriented BEPSII (Biogeochemical Exchange Processes at Sea-Ice Interfaces) community and the atmospheric chemistry and sea-ice oriented CATCH (Cryosphere and ATmospheric CHemistry) community, SCOR working group Clce2Clouds has worked diligently since 2021 to (1) synthesize and refine the conceptual representation of relevant processes, and (2) address key uncertainties in the biological and chemical controls on atmospheric chemistry, aerosol and clouds in polar ocean environments.

Objectives: Clce2Clouds is co-chaired by Megan Willis (USA) and Nadja Steiner (Canada) with full and associate members spanning 17 countries across the globe. The group addresses the key science questions: 1. What are the key biological and chemical systems (i.e., chemical species whose emission and deposition is driven by coupled biological, chemical, and physical processes) in polar ocean environments that control atmospheric chemistry and resulting climate feedbacks? 2. How does the formation, evolution, and melt of sea-ice and snow cover in the polar oceans impact emission and deposition of climatically and biogeochemically active materials? 3. In what ways are these impacts similar or different between the Arctic and Southern Oceans?

The questions were integrated into 5 working group objectives comprising the terms of reference (TORs):

- (TOR1) *To synthesize key coupled biological and chemical systems that drive atmospheric reactive trace gas, aerosol, and cloud properties in polar ocean environments.*
- (TOR2) *To identify similarities and differences in controls on exchange processes between the Arctic and Antarctic ocean-ice-atmosphere (OIA) systems.*
- (TOR3) *To develop a conceptual model of exchange processes in OIA systems, focusing on key reactive trace gas and aerosol species prioritized in O1.*
- (TOR4) *To develop interdisciplinary campaign planning recommendations to guide future studies and address model and measurement gaps.*
- (TOR5) *To facilitate community and capacity building opportunities for sustainable multidisciplinary science at the OIA interface.*

Outcomes: The congenial and imaginative team brought together in this working group continuously strove to dismantle the silos of our traditional disciplines throughout the lifetime of

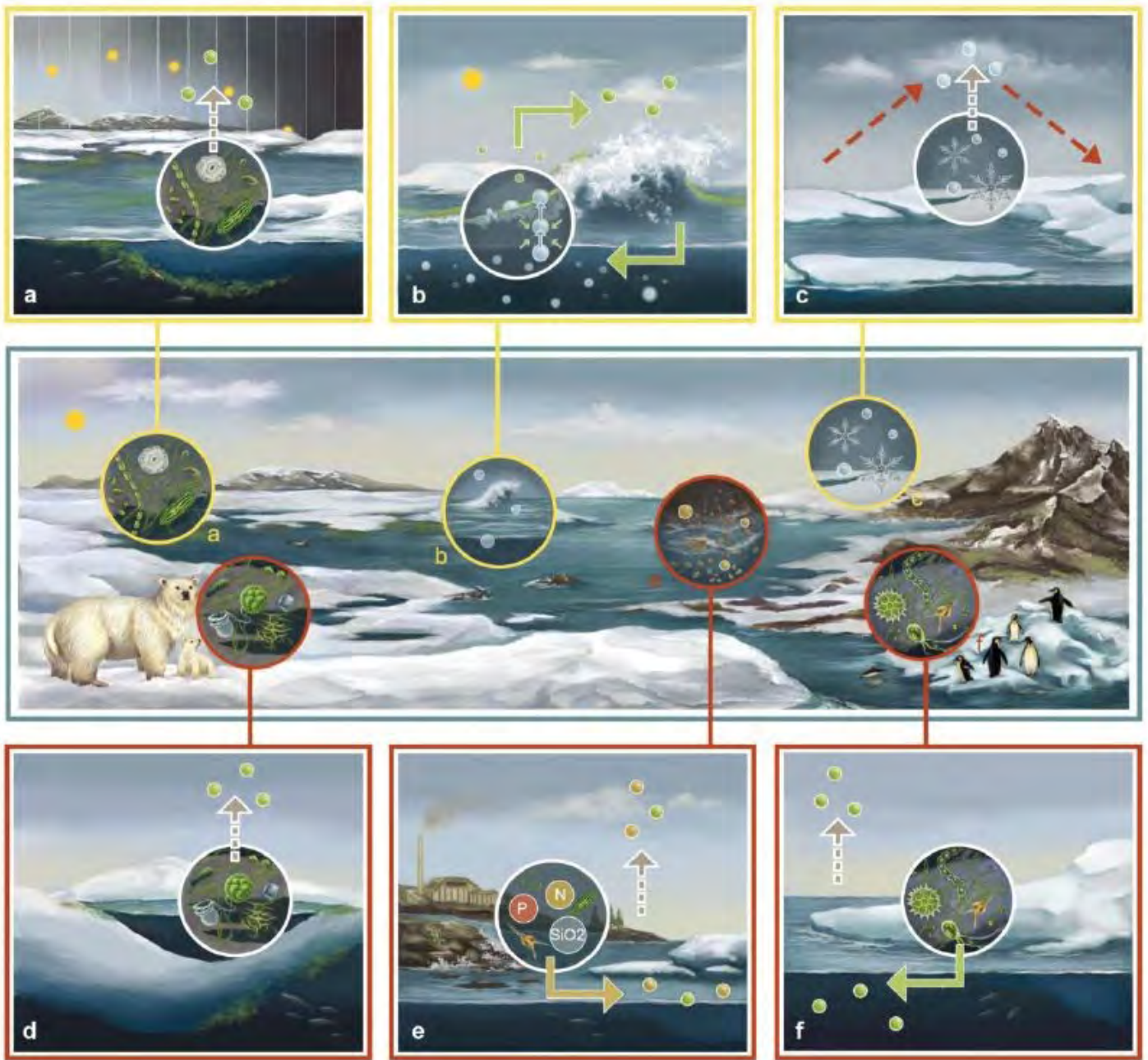


Figure 1: Center panel: Conceptual overview of primary aerosol sources and emission processes in the polar environment. Key processes are magnified in sub panels and color-coded to reflect the current level of scientific understanding: yellow represents not well understood processes and red denotes particularly poorly constrained mechanisms. Top row subpanels: (a) seasonal cycle of primary biological aerosol emissions; (b) bubble bursting and wave breaking as mechanisms for sea spray aerosol production, incorporating material from both the bulk sea water and the sea surface microlayer; (c) aerosol emissions from open leads and blowing snow during the polar winter, spring, and fall. Bottom row subpanels: (d) potential emissions from melt ponds during seasonal melt; (e) introduction of primary materials into the coastal ocean via river runoff and processing of terrestrial organic matter before emission into the atmosphere; (f) glacial discharge contributing aerosol-relevant materials to coastal waters before atmospheric emission. Figure from Creamean et al. 2026, graphic design: Mrinmayi Dalvi, India (aranyagaatha.wordpress.com).

the working group, starting with a series of tutorial lectures on fundamentals of our disciplines at the very meeting (<https://www.Clce2Clouds.org/tutorials>). The working group has built on that foundation to produce key reviews and research recommendations, as well as to further promote air-snow-ice-ocean interdisciplinary research capacity through additional educational activities.

Primary aerosols, which play a critical role in polar climate systems, influencing cloud formation, precipitation, radiative balance, and surface energy budgets, were a major focus of the working

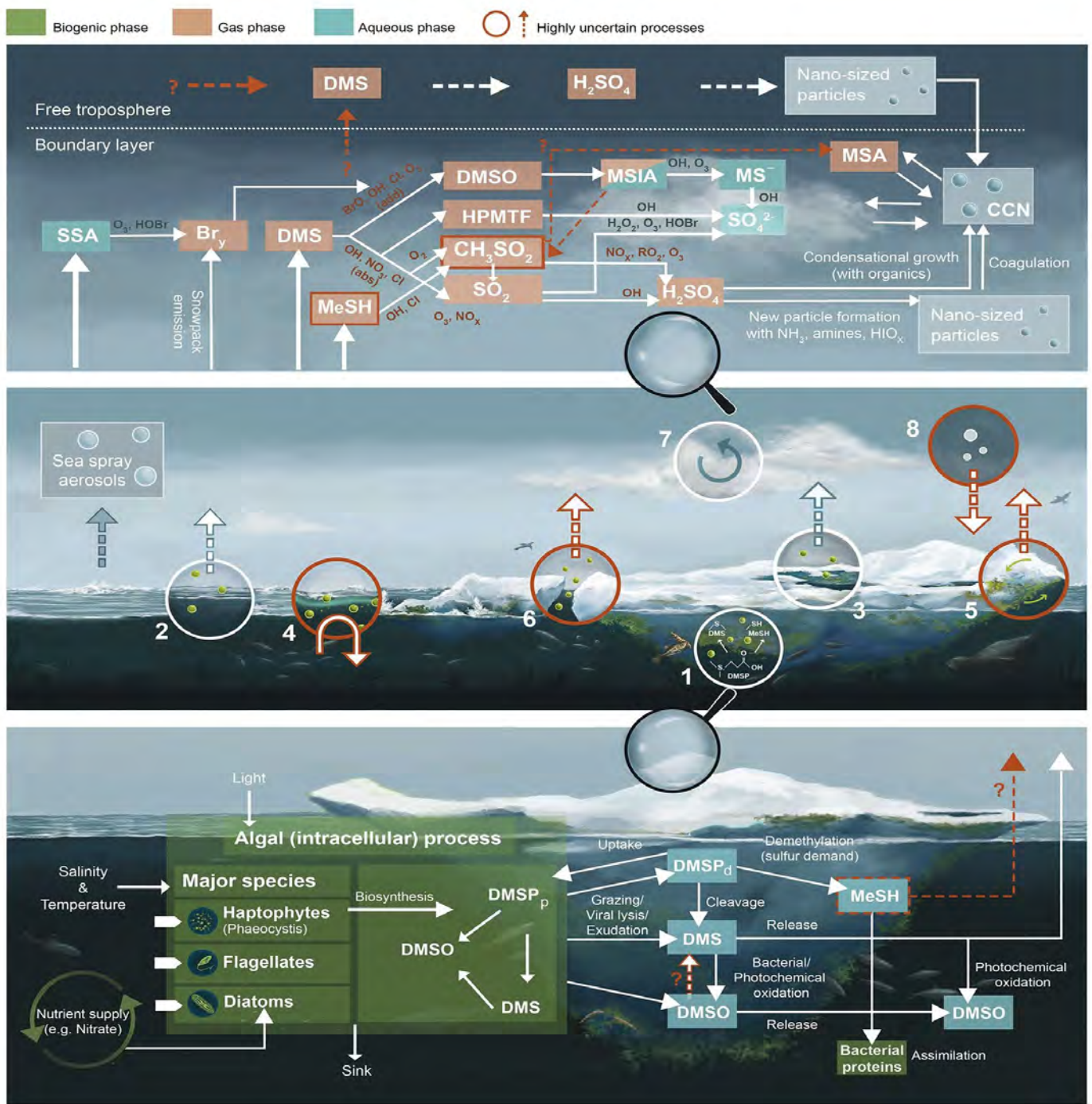


Figure 2: Summary of the biogenic sulfur cycle in the coupled ocean-sea ice-atmosphere (OIA) system. The middle panel shows the overview of key processes: (1) Biological production of DMSP and subsequent conversion into VMS at the top, bottom, or under sea ice, (2) sea-to-air emission of VMS, (3) production and emission of VMS through melt ponds, (4) inhibition or delay of VMS emission by meltwater layers, (5) release of VMS from surface slush layer to ocean or atmosphere (ice-to-air emission), (6) episodic VMS emission from leads or at the edge of sea ice, (7) atmospheric VMS oxidation through different gas-and multiphase pathways and subsequent new particle formation and growth, and (8) new particle formation in the free troposphere and subsequent intrusion to the boundary layer. Bottom and top panels expand (1) and (7), respectively, for the detailed biological and chemical processes. Green, red, and blue boxes indicate the species in biogenic-, gas-, and aqueous-phase, respectively. Red arrows indicate highly uncertain processes or species. Figure from Ishino et al. 2026, graphic design: Mrinmayi Dalvi, India.

group. Creamean et al. (2026) provides a comprehensive synthesis of primary aerosol sources, transformation and removal processes, and broader atmospheric impacts in polar regions, emphasizing their links to ocean and sea-ice biogeochemistry. These aerosols (including sea salt, primary organic aerosol, and primary biological aerosol particles) originate from marine and cryospheric environments and are emitted through physical processes, such as wave breaking,

bubble bursting, and blowing snow (Figure 1). Emission sources include seawater, sea ice, snow, and freshwater from river discharge and glacial runoff. Once airborne, these particles can serve as a chemical reservoir, influencing atmospheric composition and reactivity, and as seeds for cloud droplet and ice crystal formation, influencing cloud microphysics and polar climate. Despite their importance, many of the processes governing primary aerosol emissions and transformations remain poorly constrained, with most pressing knowledge gaps pertaining to emission processes, limited spatiotemporal observational coverage, instrumentation constraints, parameterization development, and the integration of interdisciplinary expertise. Creamean et al. highlight that future research efforts should prioritize strategically coordinated and cross-disciplinary process studies, advancements in measurement technologies and coverage, and close collaboration between modelers and observational scientists to inform and refine model parameterizations. Improved understanding will be essential for anticipating future changes in aerosol-radiation and aerosol-cloud interactions and their implications for polar and global climate systems.

The sulfur cycle was also a key priority for the group; polar oceans and sea-ice regions are global hot spots for the production of biogenic volatile methylated sulfur (VMS) compounds: dimethyl sulfide (DMS) and methanethiol (MeSH). Ishino et al. (2026) synthesize current knowledge of the polar biogenic sulfur cycle and its representation in models. VMS compounds make important contributions to atmospheric particle formation and cloud property modulation, especially when polar atmospheres are pristine (Figure 2). As a result, the polar biogenic sulfur cycle may induce significant climate feedback in response to ongoing sea ice decline. However, polar VMS production, emission, and atmospheric oxidation processes remain poorly represented in current numerical models, hampering assessments of their radiative impacts and, in turn, implementation of targeted observations necessary for providing predictive understanding of changes in the ocean-sea ice-atmosphere (OIA) system. To untangle the existing gaps and provide a roadmap toward predictive understanding, we identify key features of sea ice habitats for biological VMS production, sea ice physical features that enhance or suppress VMS emissions, and atmospheric VMS oxidation at low temperatures that controls the contribution of oxidation products to particle formation or growth. These features are tightly coupled, emphasizing the need for coordinated efforts across disciplines that span the OIA interface, and among observational, experimental, and modeling communities. Ishino et al. (2026) recommend 4 priority research areas: (1) model representation of biological VMS production at the sea ice bottom and surface; (2) improved quantification of cloud condensation nuclei (CCN) sensitivity to VMS emissions with updated gas phase and multiphase oxidation chemistry at low temperatures; (3) better spatial and seasonal quantification of MeSH abundance and its biological and chemical controls in sea-ice environments; and (4) assessment of the contribution of episodic extreme VMS emissions during sea-ice breakup for the polar CCN budget.

A third synthesis covering the Nitrogen cycle was also planned, but major scientific gaps in knowledge of the N-cycle in sea ice, limited our ability to build a conceptual model. This lack of knowledge in sea ice and the atmosphere leads to challenges in identifying links to atmospheric oxidising capacity, and aerosol and cloud processes. Rather than a detailed literature review and synthesis, the group's work on the N-cycle is being reframed as a short commentary highlighting knowledge gaps (Frey, Zhang, et al., in prep.).

The group is also currently finalizing a journal article showcasing "A Vision for Interdisciplinary Observations across the Polar Ocean-Ice-Atmosphere (OIA) Interface" (Zieger et al., in prep.). The article uses outcomes from three open community discussions to develop a community-driven framework for designing joint oceanic and atmospheric observational campaigns building on the Clce2Clouds conceptual models. The paper discusses major challenges in planning interdisciplinary observations across the OIA interface and presents an interdisciplinary modeling and observational strategy using examples of a) the biogenic sulfur cycle in sea-ice regions and b) melt pond systems as sources of primary biological aerosol particles and ice nuclei.

Clce2Clouds has had an overarching focus on capacity-building and Early Career Researcher (ECR) engagement and training in a multidisciplinary context, as well as on building a common language and sustainable multidisciplinary science community across the OIA interface. Building on the tutorial lectures on the Clce2Clouds website (www.Clce2Clouds.org), we are

preparing a tutorial-style review paper, focused on fundamental concepts that link sea-ice biogeochemistry with atmospheric science and chemistry: “What do we need to know from each other on either side of the OIA interface?” (Miller et al., in prep.). In addition, a seminar highlighting collaboration opportunities on Indian polar research stations is planned for 2026 as part of the SOLAS (Surface Ocean Lower Atmosphere Study) seminar series. All Clce2Clouds papers are collated in the Elementa Special Feature - Clce2Clouds ([Special Feature: Coupling of Ocean-Ice-Atmosphere Processes: From Sea-Ice Biogeochemistry to Aerosols and Clouds \(Clce2Clouds\) | Elementa: Science of the Anthropocene | University of California Press](#)).

The jewel in the crown of the working group’s capacity building activities was a sea-ice field school at Saroma Lagoon in Japan, 28 February to 9 March, 2026 (Figure 3), co-organized with BEPSII and CATCH. With a primary goal of building capacity for sustainable multidisciplinary science at the OIA interface, the Saroma sea-ice school was designed to equally represent ocean, sea ice, and atmospheric sciences through lectures, and field, laboratory, and modelling exercises. A key goal was to develop a base understanding of all components of this interdisciplinary field at an early career stage and facilitate cross-collaboration in the future. Key to fostering this research capacity is establishing connections, friendships and shared memories, thereby increasing scientists’ comfort level when trying to reach out across disciplines over the course of a career. In addition to the OISA science components, complementary teaching components were designed to support early career researcher training and career advancement. Accordingly, the school included lectures and workshops on Indigenous traditional knowledge, knowledge co-production and two-eyed seeing, science communication, time management, and publication strategies.

Feedback from 29 ECRs from 17 countries who attended the school was extremely positive. Several students had not seen sea ice before and specifically never set foot on sea ice, making this an even more memorable experience. The school received 208 applications from 45 countries, making the selection extremely difficult. The extensive educational program was conducted by 19 lecturers, with field support from 8 students out of the host institution in Japan (the lab of Daiki Nomura, Hokkaido University). The program contained 17 hours of lectures on 11 topics, 16 hours in the field and 15 hours in the lab on the 5 main topics, where 5 groups rotated through each topic over the course of the week, 11 hours of poster sessions and networking (including karaoke!). A live call with colleagues on RV Polarstern in the Weddell Sea was particularly engaging, as students heard real-time from senior researchers doing exactly the measurements in the field that the students were learning in the school. The participation of a communications expert allowed for dozens of hours of recordings, which are currently being turned into tutorial videos that will be added to the Clce2Clouds website. Students and lecturers were also treated to occasional video summaries which were then posted through various communication channels.



Figure 3: Group picture Saroma field school, March 2026

At the final working group meeting, held in Shiretoko National Park, directly after the sea-ice school, much of the conversation focussed on next steps for this dynamic group, who feel our

work on polar atmosphere-snow-ice-ocean interactions and exchanges is not yet done. Several students from the Saroma Sea-Ice School attended the meeting and participated in the discussions, lending confidence to the continuation of exciting research into this vital component of the Earth system.

Clce2Clouds would like to thank SCOR for their support of this working group. BEPSII, CATCH, Clce2Clouds, and the organizers, lecturers, and students of the Saroma sea-ice school are extremely grateful to all sponsors of the school.

References

Creamean et al 2026 *Elementa: Science of the Anthropocene* (2026) 14 (1): 00065.

<https://doi.org/10.1525/elementa.2025.00065>

Ishino et al 2026, *Elementa: Science of the Anthropocene* (2026) 14 (1): 1-60.

<https://doi.org/10.1525/elementa.2025.00067>

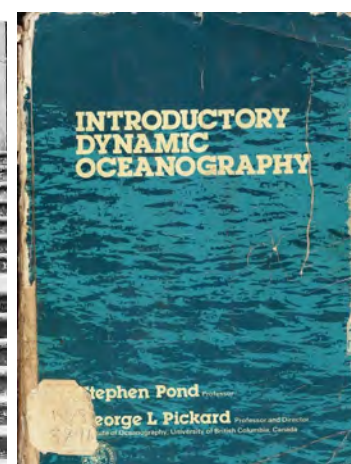
Steve Pond

Steve Pond passed away on March 23, 2026. He was part of a strong generation that led to rapid advancement in Canadian Oceanography.

From this picture, found in the [CMOS Archives](#), we see Steve kept good company and inspired more than one generation.



UBC Oceanography 1974. Names can be found [here](#) on the CMOS Archives site.



For many of us this is where it all started.

The note below was published in the [UBC News](#) on April 02 2026

Remembering Professor Stephen Pond By [Kirsten Hodge](#)

EOAS remembers Professor Stephen Pond, who passed away on March 23, 2026, and extends our sincere condolences to his family and friends. Steve was a distinguished physical oceanographer and long-time member of the UBC and EOAS community, serving as a professor from 1971 to 1996. He began with the Institute of Oceanography, later the Department of Oceanography, and continued as Professor Emeritus following the merger that formed EOAS. He earned his B.Sc. (Honours, Physics-Mathematics, 1962) and Ph.D. (1965) from UBC.



EOAS Professor Stephen Pond during his time at UBC.

Over the course of his career, Steve made foundational contributions to physical oceanography, particularly in air-sea interaction and coastal ocean processes. His achievements were recognized with numerous honours, including a UBC Killam Senior Fellowship at

Princeton's Geophysical Fluid Dynamics Laboratory (1987), the Canadian Meteorological and Oceanographic Society President's Prize (1991), and the Tully Medal (2003). His research significantly advanced understanding of circulation, dynamics, and mixing in British Columbia's coastal waters. Through long-term observations and innovative numerical modelling, he helped elucidate the complex interactions among wind, runoff, and tidal forcing in systems such as the Strait of Georgia, Knight Inlet, and Sechelt Inlet, laying important groundwork for modern studies of coastal circulation and environmental processes. He was equally well known for his book "Introductory Dynamical Oceanography" written with his friend and mentor, George Pickard, which is still a standard textbook used today.

He will be remembered for his scientific leadership, his dedication to research and education, and his lasting impact on generations of students and colleagues. Our thoughts are with his family, friends, and colleagues during this difficult time.

Ducks Unlimited on the Coast

[Ducks Unlimited Canada](#) have many [projects with ocean connections](#). Among these is a multi-year project restoring habitat for juvenile salmon. The article below is extracted from this [story featured](#) on the Ducks Unlimited website:

Coming of age on the edge of the ocean, *How moving sediment benefits juvenile salmon*

by Chantelle Abma March 31, 2025

Like human teenagers, juvenile salmon need spaces to grow into the mature fish they will become; ready to take on the saltwater ocean, and eventually return to their freshwater spawning grounds. But these transitional spaces are challenging to find.



A DUC staff member walks along the temporary pipeline that brings sediment to the foreshore of the Fraser River Estuary. © Ducks Unlimited Canada

The [Fraser River Estuary](#)—one of North America's most important salmon ecosystems—has lost vast expanses of tidal marshes, crucial spaces that provide juvenile salmon with food and shelter during a critical transitional phase of their lives. Without these habitats, survival rates drop, threatening salmon populations and the species, communities, and cultures that rely on them.

To restore these critical spaces, Ducks Unlimited Canada (DUC) and its partners are reshaping the coastline through the [Sturgeon Bank Sediment Enhancement Pilot Project](#). Entering its fourth year, the project repurposes sediment dredged from the Fraser River—material that would otherwise be lost to the ocean—by strategically placing it into the estuary where much of it

would have naturally built up if human-made interventions like dikes and jetties weren't present. This additional sediment creates a stronger foundation for tidal marshes, rebuilding and reinforcing them.



A new foundation for young salmon

This past fall, sediment from the Deas Basin BC Ferries Fleet Maintenance area was transported by barge and dispersed at Sturgeon Bank via a floating pipeline. This method minimizes disruption while allowing natural tidal forces to distribute the sediment, mimicking historical processes that once nourished these marshes.

Since the project began, over 21,000 cubic metres of sediment have been placed in select locations to help raise the elevation of this habitat and aid in the restoration of these marshes. The benefits extend beyond salmon—shorebirds, waterfowl, and marine life also depend on these ecosystems, and healthy tidal marshes help buffer coastlines from storms and rising sea levels.



The sediment was dredged from a local marina at night to complement the tide schedule. © Ducks Unlimited Canada

Restoring the balance

The loss of sediment in the Fraser River Estuary is a consequence of human activities such as the addition of river training structures, dredging, and development. Sturgeon Bank alone has lost an estimated 395 acres (160 hectares) of tidal marsh since the 1980s—equivalent to 40 BC Place Stadiums.



Sediment is delivered to the pre-selected location via temporary pipeline. © Ducks Unlimited Canada

Using a 1.4-kilometre floating pipeline, rather than heavy machinery, allows sediment to be placed strategically, letting tides, currents and waves naturally disperse it. “This floating pipeline lets us move sediment efficiently while protecting the delicate estuary,” said Piet Greven of Fraser River Pile and Dredge, the contractor that completed the sediment pumping. “We’re developing sustainable methods that could be used in other regions.”

A blueprint for the future

The Sturgeon Bank project is part of the larger Restore Fraser River Estuary Salmon Habitat (ReFRESH) initiative, led by DUC in collaboration with [Raincoast Conservation Foundation](#), the [Lower Fraser Fisheries Alliance](#), and [Asarum Ecological Consulting](#). Funding is provided by [The Government of Canada](#) and the [Province of British Columbia](#) through the BC Salmon Restoration and Innovation fund, with additional support from [Nature Force](#).



An aerial view shows the two added mounds visible parallel to the dike along the Richmond coastline. © Matthew Christensen, Ducks Unlimited Canada

As monitoring continues, DUC and its partners aim to expand these efforts across the Fraser River Delta, creating a resilient network of tidal marshes that will support salmon populations for generations.

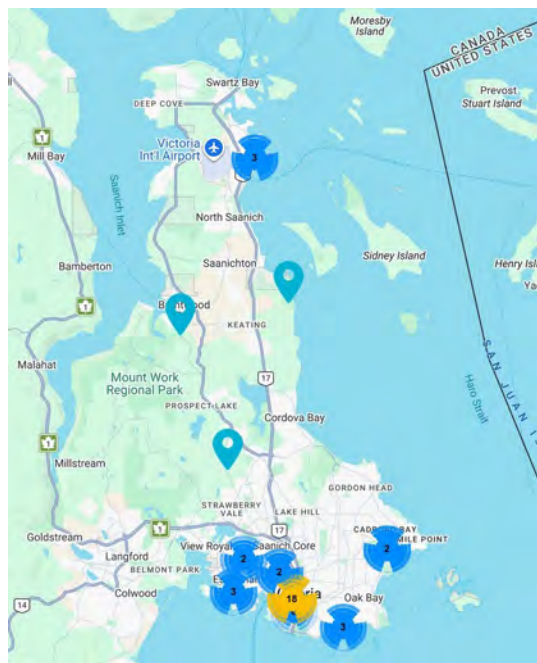
The full article can be found [here](#)

Ducks Unlimited has a history of [related work](#).

Fisheries and Oceans Canada has released this [progress report](#) on the BC Salmon Restoration and Innovation Fund.

Ocean(s) Day/Week

Ocean Week is June 1-8. Ocean Day (\cong Oceans Day) is June 8. In Canada it has expanded into Ocean Week. Take a look at the [United Nations website](#) for Ocean Day and the website for [Canadian Ocean Week](#).



The Victoria BC area is particularly active.

Many events have started early and continue well past the official dates..

[What's the difference](#) between 'Ocean Day' and 'Oceans Day'?

[Why "Ocean" not "Oceans"?](#)

'There's a reason we dropped the "s." Because there is only one ocean — one living, connected system that powers our climate, sustains life, and unites us all.'

Since launching global coordination in 2002, World Ocean Day has grown from an idea to thousands of events and millions of people reached each year. The World Ocean Day network includes 2,000+ organizations in 180 countries. Following a four-year petition drive with our international network, the United Nations officially recognized the Day in 2008. World Ocean Day efforts have been co-led with a 25-member Youth Advisory Council since 2016, now with 149 alumni from 66 countries.

The Canadian site includes the [Blue Learning Lab](#). Within the Lab you can find a (borrowable) [Giant Floor Map](#), [Virtual Reality and Augmented Reality](#) games and experiences, [Fishers Space](#) and a citizen science [Take Action Zone](#).

There are excellent short videos from the [United Nations](#) (2 minutes) and [Canadian](#) (1 minute) 2025 celebrations.



The Newsletter now has over 400 subscribers, mostly working in Canadian Ocean Sciences. This section provides an opportunity to highlight your research programs to our community.

You are invited to send contributions to David Greenberg, davidgreenberg@alumni.uwaterloo.ca

Le bulletin compte désormais plus de 400 abonné.e.s, travaillant principalement dans le domaine des sciences océaniques canadiennes. Mettez en valeur vos programmes de recherche en publiant un article dans cette section de votre bulletin.

Faites parvenir vos contributions à David Greenberg, davidgreenberg@alumni.uwaterloo.ca

MEETINGS

Le 60^e congrès de la SCMO / The 60th CMOS Congress

Le 60^e congrès de la Société canadienne de météorologie et d'océanographie (SCMO) se tiendra virtuellement du **1er au 4 juin 2026**.

Le congrès réunira des chercheurs.e.s issu.e.s des sciences de l'atmosphère, des océans et du climat afin de discuter de la surveillance, de l'atténuation et de la gestion de ces incertitudes. Il proposera des présentations plénières virtuelles et des sessions scientifiques portant à la fois sur la recherche et les opérations.

[Le site web du congrès](#)

[Aperçu du congrès 2026](#)

[Programme du congrès](#)

[Recherche de résumé](#)

[Sessions scientifiques](#)

[Inscription](#)

2026 Congress at a Glance / Aperçu du Congrès de 2026

Time (EDT) Temps (HAE)	Monday June 01 Lundi 01 juin	Tuesday June 02 Mardi 02 juin	Wednesday June 03 Mercredi 03 juin	Thursday June 04 Jeudi 04 juin
11:00 - 12:00	Plenary / Plénière --- 1 Dr. David Spiegelhalter (University of Cambridge) <i>The Art of Uncertainty: Planning for a Future that is Hard to Imagine</i> <i>L'Art de L'incertitude: planifier un avenir difficile à imaginer</i>	Plenary / Plénière --- 2 Dr. Claudie Beaulieu (University of California Santa Cruz) <i>Is the Rate of Warming Accelerating? A Statistical Assessment from Global to Regional Scales</i> <i>Le rythme du réchauffement s'accélère-t-il? Une analyse statistique à l'échelle mondiale et régionale</i>	Plenary / Plénière --- 3 Dr. Christopher Subich (Meteorological Research Division of Environment and Climate Change Canada (ECCC)) <i>Navigating Uncertainty in the AI Era of Weather Forecasting</i> <i>Faire face à l'incertitude à l'ère de l'IA dans le domaine des prévisions météorologiques</i>	Plenary / Plénière --- 4 Dr. Katharine Hayhoe (Chief Scientist for The Nature Conservancy and a Distinguished Professor at Texas Tech University) <i>What We Don't Know, and Why It Matters</i> <i>Ce que nous ignorons, et pourquoi c'est important</i>
12:00 - 12:30	Opening Remarks / Allocution d'ouverture	Break / Pause (30 minutes)		Closing Remarks / Allocution de fermeture
12:30 - 13:30	Parallel Sessions / Sessions parallèles (5) (2030-1, 4010, 5010-1, 5030-1, 5100)	Parallel Sessions / Sessions parallèles (6) (2030-4, 2050-2, 3010-3, 4080-1, 4070-1, 5060)	Parallel Sessions / Sessions parallèles (6) (2020-1, 2030-6, 2050-4, 3020-1, 4040-1, 5050-2)	Parallel Sessions / Sessions parallèles (6) (2020-3, 3030-1, 4040-3, 4060-2, 5050-4, 5070)
13:30 - 13:50	Break / Pause (20 minutes)			
13:50 - 14:50	Parallel Sessions / Sessions parallèles (5) (2030-2, 3010-1, 4020, 5010-2, 5030-2)	Parallel Sessions / Sessions parallèles (6) (2030-5(+4F), 2050-3, 3040 (+1F), 4080-2(+6F), 4070-2, 5050-1)	Parallel Sessions / Sessions parallèles (6) (2010, 2020-2, 3020-2, 4040-2, 4060-1, 5050-3)	Parallel Sessions / Sessions parallèles (5) (2040, 3030-2, 4060-3, 5040, 5080)
14:50 - 15:10	Break / Pause (20 minutes)			CONGRESS CONCLUDED / CONGRÈS TERMINÉ
15:10 - 16:10	Parallel Sessions / Sessions parallèles (5) (2030-3, 2050-1, 3010-2, 4030, 5090)	Poster Session Session d'affiches	Awards Ceremony / Cérémonie de remise des prix	See you at the 2027 Congress / Rendez-vous au congrès de 2027

Congress Time Zone is UTC-4 hours or Eastern Day Time (EDT) / Le fuseau horaire du Congrès est UTC-4 heures, soit l'Heure Avancée de l'Est (HAE)

The 60th Canadian Meteorological and Oceanographic Society (CMOS) Congress will be held virtually from **June 1-4, 2026**.

The Congress will bring together researchers from across the atmosphere, ocean, and climate sciences to discuss monitoring, mitigating, and managing these uncertainties, featuring virtual plenary presentations and scientific sessions addressing both research and operations.

[Congress website](#)

[Congress at a glance](#)

[Congress Agenda](#)

[Search Abstracts](#)

[Scientific Sessions](#)

[Registration](#)

MedGU 2026

November 8-11, 2026, Cairo, Egypt and virtual.

The Mediterranean Geosciences Union (MedGU) is organizing 6th MedGU Annual Meeting, to be held at the National Research Institute of Astronomy and Geophysics (NRIAG) in Cairo, followed by a two-day field trip. The MedGU Annual Meeting is among the region's leading geoscience conferences, attracting approximately 700 participants annually, both in person and online. It provides a high-level platform for researchers—particularly early-career scientists—to present their work, exchange ideas, and engage with experts across all geoscience disciplines.



The 2026 edition will feature:

- Scientific sessions covering a broad spectrum of geoscience topics
- Workshops, panel discussions, and networking opportunities
- Interdisciplinary discussions on geoscience–society interactions
- A social program and optional field trip, combining exploration of Egypt's distinctive geological heritage with visits to some of the most renowned Pharaonic sites in Cairo and its surroundings

Meeting [website](#).

Abstract **deadline: 31 July 2026**

AGU26

December 7-11, 2026, San Francisco, CA, USA.

Every year, AGU's Annual Meeting convenes over 25,000 attendees from 100+ countries to share scientific findings and make connections. Researchers, scientists, educators, students, policymakers, exhibitors, journalists and communicators attend AGU's Annual Meeting to better understand our planet and environment, and our role in preserving its future. It is a results-oriented gathering rooted in celebrating and advancing positive individual and collective outcomes.

AGU ANNUAL MEETING

7-11 December 2026 | San Francisco, CA

Why Attend?

- Cutting-Edge Science: Discover the latest research in Earth and space sciences.
- Global Collaboration: Network with experts, policymakers, and emerging leaders.
- Interactive Sessions: Attend workshops, panel discussions, and hands-on learning experiences.
- Career Advancement: Access mentoring programs, career fairs, and funding opportunities.

Important Dates & Deadlines

- Mid-June 2026 - [Abstract submissions open](#). Session proposal acceptance notification emails sent.
- 5 August 2026 - **Abstract submissions close**.
- Mid-August 2026 - Attendee registration and housing opens.

Meeting [website](#).

2026 SCOR Annual Meeting

September 8-10, 2026, Helsinki, Finland and virtual.

Please see the full announcement under *SCOR International* in the GENERAL section below.

Xiamen Symposium on Marine Environmental Sciences

January 12-15, 2027, Xiamen, China.

The Xiamen Symposium on Marine Environmental Sciences (XMAS 2027) is jointly organized by the State Key Laboratory of Marine Environmental Science (MEL), Xiamen University, and the Department of Earth Sciences, National Natural Science Foundation of China (NSFC). XMAS 2027 will feature interdisciplinary, cutting-edge sessions covering physical, chemical, and biological oceanography, marine pollution, as well as marine policy and management. In addition, a range of workshops and special sessions focusing on emerging topics in marine environmental sciences will be offered, including ocean-based carbon removal, ocean governance and sustainability, the marine economy, marine education and outreach, as well as dedicated sessions on Women in Science and mentoring future scientists. These activities will bring together leading experts and early-career researchers from around the world.



[GEOTRACES](#) related events: Session 8 - *Trace metal biogeochemical cycles in the ocean*, Workshop 3 - A GEOTRACES synthesis workshop: *Building data outcomes for the Pacific Ocean and its marginal seas*

Symposium [website](#).

Abstract **deadline June 30, 2026, 23:59** China Standard Time (GMT+8)

Registration **deadlines**: Early Bird **Oct 15 2026**, Regular **Dec 14 2026**, Late **Dec 15 2026** and thereafter.

Advancing Digital Twins of the Ocean

Integrating Socio-Ecological Data, Models, and Applications for Sustainable Marine Management and Policy

November 2-5, 2026, Copenhagen, Denmark.

This international symposium, organised by the SEAtwins cluster project endorsed by the UNESCO Ocean Decade, will explore the latest updates and scientific advances in social-ecological analysis and modelling of the marine and coastal areas, aiming at achieving the goals outlined in the EU Mission Goals to restore, protect and sustainably use our ocean and waters.



The scope of the symposium is to explore the latest updates and scientific advances in social-ecological analysis and modelling of the marine and coastal areas, aiming at achieving the goals outlined in the EU Mission Goals to restore, protect and sustainably use our ocean and waters.

The symposium brings together researchers and practitioners working on Digital Twins of the Ocean (DTOs), with a particular focus on EDITO — exploring the status of research and practical experiences in integrating social-ecological data and models — and next steps regarding EDITO and initiatives such as Destination Earth. Symposium attendees will have the opportunity to participate in additional trainings on development and use of socio-ecological models and digital tools developed in the SEAtwins projects.

[Registration](#) is FREE

[Abstract deadline](#): 15 June 2026

Please send meeting announcements to
David Greenberg,
davidgreenberg@alumni.uwaterloo.ca

SVP faites parvenir vos annonces de réunion à
David Greenberg,
davidgreenberg@alumni.uwaterloo.ca

Coming Sooner and Later / À venir plus tôt et plus tard

Meetings of interest but deadlines have passed and meetings to plan for well ahead of time.
Réunions intéressantes mais dont les échéances sont passées et celles à planifier bien à l'avance.

Save the date / Réservez la date

2027 Ocean Decade Conference

From 7 to 9 April 2027, Rio de Janeiro, Brazil. The [conference](#) will convene up to 2,000 participants for three days of high-level dialogue, partnership, and collaboration. It will be a milestone event of the [UN Decade of Ocean Science for Sustainable Development \(2021-2030\)](#).

Governing Principles in Polar Ecosystems (Gordon Research Seminar)

The Polar Oceans as Global Lynchpins (Gordon Research Conference)

Oxnard, California, USA, March 20-21 (seminar) March 21-26 (Conference) 2027. The 2027 incarnation of the Polar Marine Science [GRC](#) will provide an interdisciplinary exploration of some of the most tenacious controversies in polar oceanography, particularly within the context of a changing climate. The Polar Marine Science [GRS](#) provides a unique forum for young doctoral and post-doctoral researchers to present their work, discuss new methods, cutting edge ideas, and pre-published data, as well as to build collaborative relationships with their peers.

[Seminar](#) [Conference](#)

ASLO 2027 Aquatic Sciences Meeting

28 February-5 March 2027 · San Juan, Puerto Rico, USA. *Waterscapes Under Pressure: Drivers and Opportunities* The 2027 ASLO ASM aims to explore the drivers and stressors that shape aquatic systems, and identify opportunities to implement sustainable solutions. [Website](#)

Coming Soon / À venir

Ocean, Offshore and Arctic Engineering

Tokyo, Japan, June 7-12, 2026. The Ocean, Offshore, and Arctic Engineering Conference brings together global expertise to address the most critical challenges and innovations shaping marine and offshore systems. The presentations will cover the five major themes that reflect both enduring engineering foundations and emerging frontiers.

Conference [website](#)

ECSA 61- Bridging the gap between science and policy in estuarine and coastal marine biodiversity: the way forward

Brussels, Belgium, August 24-27, 2026. There is an urgent need to address the challenges of the triple planetary crisis: climate change, biodiversity loss and pollution. Marine scientists and policy-makers worldwide have emphasized that in particular threats to biodiversity are the major challenge for both the health of the planet and the welfare of human societies. It may still be possible to submit a poster abstract.

Conference [website](#)

7th DMS(P) Symposium: Sulfur - Carbon Nexus in the SOLAS Sphere

Boothbay Harbor, Maine, USA, October 12-15, 2026. The organosulfur compound dimethylsulfoniopropionate (DMSP) ignited an entire subfield of biogeochemistry to investigate the precursor of the “anti-greenhouse gas” dimethylsulfide (DMS). Since then, decades of research have unveiled the importance of DMS(P), and related compounds, to carbon cycling and air-sea interactions, and ultimately an outsized contribution to global climate. This Symposium will bring together a diversity of researchers interested in synthesizing the inextricable link of the sulfur and carbon cycles from cellular to global scale processes.

Symposium [website](#). [Registration](#).



POSITIONS AVAILABLE

4 Bourses d'excellence au doctorat

Université du Québec à Rimouski, Rimouski, QC

L'Institut des sciences de la mer de l'Université du Québec à Rimouski (ISMER-UQAR) et la Commission géologique du Canada lancent un prestigieux programme de bourses d'excellence.

Ce programme de bourses vise à recruter jusqu'à 4 nouvelles personnes qui débiteront

leurs études doctorales à l'ISMER-UQAR à temps complet à partir de l'automne 2026 ou de l'hiver 2027. Les bourses, d'un montant de 30 000 à 35 700 \$ par année (+ une bourse de majoration pour les frais de scolarité exigés pour les étudiantes et les étudiants internationaux le cas échéant), seront d'une durée de trois ans.



Parmi les projets à l'étude figurent :

- [Cartographie du pergélisol sous-marin](#) sur le plateau Arctique occidental
- [Contrôles glaciaires et hydrodynamiques](#) de l'évolution des littoraux arctiques
- [Quantification](#) des stocks de carbone organique et des processus de séquestration dans les fjords subarctiques et arctiques de l'est du Canada
- [Reconstruction paléogénomique](#) de la diversité des microalgues sur les côtes canadiennes face aux changements environnementaux et relation avec les éléments traces
- [Transformations côtières](#) liées au climat dans l'Arctique canadien occidental: dynamiques sédimentaires côtières et risques

[La page web principale](#)

Postdoc - Arctic Trace Metal Biogeochemistry

Université Laval QC, University of Victoria BC

The [Aquatic Geochemistry Group](#) lead by Prof. Raoul Couture at Université Laval, in collaboration with the Cullen Lab at the University of Victoria, invites applications for a Postdoctoral Fellowship as part of the REFUGE Arctic program. The successful candidate will take primary responsibility for the analysis and scientific interpretation of a unique sample set of seawater, river, glacial meltwater, fjord and lake water samples collected along a salinity gradient during the 2024 REFUGE Arctic expedition aboard the CCGS Amundsen. All samples were collected using GEOTRACES-compliant trace-clean protocols, using a Trace Metal Rosette and processed under Class-100 clean laboratory conditions on board.



University of Victoria

Qualifications Required:

- PhD in analytical chemistry, marine or aquatic geochemistry, oceanography, or a closely related field
- Demonstrated experience with trace-clean sampling and laboratory techniques
- Hands-on experience with ICP-MS or ICP-MS/MS analysis of aqueous environmental samples
- Track record of research productivity as evidenced by peer-reviewed publications
- Ability to work independently and collaboratively within a multidisciplinary team
- Strong written and oral communication skills in English

Posted May 22, 2026. **No deadline given.**

[Details](#)



Tenure-Track Faculty Positions Ocean Science



DEPARTMENT OF
OCEAN SCIENCE

Hong Kong University of Science and Technology

The Hong Kong University of Science and Technology (HKUST) invites applications for tenure-track positions at all ranks within the Department of Ocean Science. Established in 2018, the Department of Ocean Science emphasizes multidisciplinary research.



THE HONG KONG
UNIVERSITY OF SCIENCE
AND TECHNOLOGY

We welcome outstanding candidates in all disciplines of ocean science and technology, and particularly encourage applications at the Associate Professor to Full Professor levels with research expertise in: ocean biogeochemical modeling; ocean-atmosphere interactions; cryosphere dynamics; climate variability and change; ocean remote sensing and technology; AI and data-driven oceanography; biological oceanography with a focus on higher trophic organisms; blue economy inclusive of fishery sciences.

Applicants must hold a PhD degree in ocean science or a closely related discipline. For Assistant Professor positions, at least 2 years of post-doctoral experience is preferred. Successful candidates should demonstrate strong research records, the potential to establish strong research programs, and a commitment to excellence in teaching at both undergraduate and postgraduate levels. The medium of instruction is English at HKUST.

[Details](#)

Closing date July 12, 2026

Research Associate III

Woods Hole Oceanographic Institution, Woods Hole, MA, USA

The Woods Hole Oceanographic Institution (WHOI) is seeking a *Research Associate III* to contribute to development of new instrumentation to quantify ocean gross primary productivity. This is a temporary, full-time, 6 month fixed term position with benefits.

This position focuses on the study and measurement of dissolved oxygen, with particular emphasis on developing and testing of an underway system for measuring the triple oxygen isotope composition of dissolved oxygen.

Essential Functions & Duties:

- Conduct independent and collaborative research on oxygen dynamics in seawater, including analysis of triple oxygen isotope composition of dissolved oxygen.
- Design, develop, and optimize systems for the extraction of dissolved oxygen from seawater samples.
- Perform and refine quantitative reduction of oxygen to water for downstream isotopic or chemical analysis.
- Lead and contribute to the development, calibration, and testing of a prototype system for at-sea measurements of triple oxygen isotopic composition of dissolved oxygen.

...

Required Qualifications & Education

- Ph.D. in Oceanography, Marine Chemistry, Chemical Oceanography, or a closely related field.
- Demonstrated expertise in oxygen dynamics in seawater, including triple oxygen isotope composition.
- Hands-on experience developing systems for extraction of dissolved oxygen from seawater.
- Experience with laser spectrometric quantification of oxygen stable isotopes

[Details](#) Posted May 6, 2026. **No deadline given.**

Looking for work? Try the CMOS site ([click](#)).

Vous recherchez un emploi? Visitez le site SCMO ([clic](#)).

GENERAL

SCOR International

2026 SCOR Annual Meeting

SCOR annual meetings are open to any participant and there is no registration fee. Participants planning to attend in person are kindly asked to **register by 1 August** to assist with logistical planning. Official registration for the Helsinki City reception will be distributed to symposium attendees 1 month prior to the event.

Website: <https://scor-int.org/events/scor-2026-annual-meeting/>

Dates: 8-10 September 2026 (general meeting)

Location: House of Science and Letters (Tieteiden talo), Helsinki, Finland with option for virtual participation

Special Event: A pre-meeting symposium on the afternoon of 7 September will highlight [Baltic and Polar Science from Finland](#). Early-career scientists in Finland are invited to [apply to present a poster](#) during the symposium. A reception hosted by the City of Helsinki will follow.

The [website for the meeting](#) contains a [link for registering](#) and [logistical information](#), and will be updated with reports of activities from the SCOR Working Groups and Projects later in the year.

This [announcement online](#)



Call for Review of 2026 SCOR Working Group Proposals

Eleven working group proposals were submitted to the SCOR Secretariat for consideration at the 2026 SCOR Annual Meeting (8-10 September 2026, Helsinki, Finland) and are available on the SCOR Web site at <https://scor-int.org/events/scor-2026-annual-meeting/> (see [Tab 2.1](#). New Working Group Proposals).

The SCOR Executive Committee will be very grateful for comments from SCOR National Committees, individuals, and interested organizations to assist in the review of these proposals. This is, in fact, one of the most important ways in which SCOR's National Committees and cooperating organizations can provide input to SCOR on scientific priorities for ocean science.

Guidance and a template for the review can be found [here](#). Reviewers may also be interested in the [instructions and FAQs](#) for working group proposals to inform the evaluation of the proposals.

Please send your comments on these proposals to the SCOR Secretariat (secretariat@scor-int.org) before 15 July 2026. Please note the earlier deadline relative to recent years to accommodate the date of the 2026 annual meeting.



Earlier this year, GEOTRACES announced the GEOTRACES Online Seminar Series, a new initiative led by the Early Career Scientist (ECS) committee.

This monthly seminar series aims to foster scientific exchange across the GEOTRACES community and beyond by bringing together senior scientists and early-career researchers around shared themes in trace element and isotope biogeochemistry.

Seminar format: Each seminar will focus on one coherent topic and feature two connected talks:

- A senior scientist providing synthesis, context, and big-picture framing
- An early-career scientist presenting new data, methods, or emerging perspectives

Schedule: The series will run from April to November 2026 (with a break in July), with seminars planned for the last Tuesday of each month. Plus, an end-year special seminar around mid-December.

Seminars will be held at either 09:00 CET/CEST or 15:00 CET/CEST, depending on the speakers' locations, to facilitate participation across different regions. Each seminar will last about one hour. They will be registered and posted on the [GEOTRACES YouTube Channel](#) to allow wider access and enable those unable to attend live to view them later.

Seminars:

Previous seminars are online.

The first seminar, April 28, 2026, *Data synthesis, modelling and integration*, Speakers: [Gregory De Souza](#) (ETH Zurich) and [Arianna Olivelli](#) (Flanders Marine Institute) can now be found [here](#).

In the second seminar, on May 26, 2026, [Jon Hawkings](#) (University of Pennsylvania) and [Laramie Jensen](#) (Columbia University) presented *Trace metal input in polar environments*. It can be found [here](#).

The third seminar, *Atmospheric aerosol deposition to the global ocean*, with presenters [Clifton Buck](#) (University of Georgia) & [Prema Piyusha Panda](#) (Stellenbosch University) is scheduled for June 30, 2026 @ 15:00 CEST

Further seminars will be announced in due course.

All seminars are presented on Zoom.

A single recurring link will be used for all seminars: [Zoom link](#)

Meeting ID: 636 5773 3493

Passcode: 651026

For more information and updates, check the [seminar web page](#).

You can also download the flier [here](#).

See more GEOTRACES news in the [GEOTRACES eNewsletter](#)



CMOS

CMOS Bulletin

From CMOS President Patrick McCarthy: “It is my pleasure to announce the first edition of our revitalized CMOS Bulletin SCMO. The Bulletin has been part of CMOS, in various formats, since 1963. Our new Bulletin will continue to publish short articles by members and others in the fields of interest to Society members. We are making these improvements as part of our 2025-2030 Strategic plan to implement an effective communication strategy. Last year, we introduced The



New Wave newsletter which provides Society information to members, such as Center news, upcoming events, Congress updates, Council and Executive matters, etc. Our highly regarded and effectively run Atmosphere-Ocean journal remains as our flagship publication to share your peer-reviewed science with the world. ...”

The Bulletin has articles on carbon emissions from wild fires, meteorology in Dante’s Divine Comedy - “La météorologie dans La Divine Comédie de Dante Alighier (et en français and in english), and a story on the historic snowstorm that struck Winnipeg in 1966.

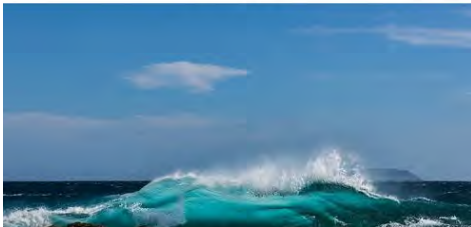
The New Wave

CMOS’s May Newsletter, [The New Wave](#), covers a lot of ground with links to Recent and Coming events, Plans and activities of CMOS National and local chapters, pointing out other CMOS publications [Atmosphere Ocean](#) and the revitalized [Bulletin](#), highlights the ECCC [Snow Cover](#) page showing trends to 2025 and 2025 anomalies with past reference periods and lots of meteorology and oceanography news.



The New Wave

May 2026



Past issues of the *The New Wave* and its predecessor, *The Wave*, as well as the CMOS Bulletin can be found in the [CMOS Archives](#).

AGA de la SCMO le 17 juin, 2026

L'assemblée générale annuelle de la SCMO aura lieu le 17 juin 2026 à 12h-14h HAE, 9h-11h HAP, 10h-12h HAR, 11h-13h HAC, 13h-15h HAA, 13h 30-15h 30 HAT.

[L'ordre du jour](#) de la réunion est disponible maintenant

Du directeur général de la SCMO Gordon Griffith, dir-exec@scmo.ca

CMOS AGM June 17, 2026

The CMOS Annual General Meeting is scheduled for June 17, 2026 from 12:00pm-2:00pm EDT, 9:00am-11:00am PDT, 10:00am-12:00pm MDT, 11:00am-1:00pm CDT, 1:00pm-3:00pm ADT, 1:30pm-3:30pm NDT

This will be a virtual meeting.

The meeting [agenda](#) is available.

From CMOS Executive Director Gordon Griffith exec-dir@cmos.ca

Canadian Ocean Science Newsletter Le Bulletin Canadien des Sciences de l'Océan

Previous [newsletters](#) be found on the [CNC-SCOR](#) web site. The CNC-SCOR website is hosted by [CMOS](#).

Newsletter #149 will be distributed in **July 2026**.

Please send contributions to David Greenberg
davidgreenberg@alumni.uwaterloo.ca

Subscribing and Unsubscribing

If you wish to subscribe to this newsletter or cancel your subscription, please visit the website:

<http://www.mailman.srv.ualberta.ca/mailman/listinfo/cnc-scor>

Les [bulletins](#) antérieurs se retrouvent sur le site web du [CNC-SCOR](#). Le site du CNC-SCOR est hébergé par la [SCMO](#).

Le Bulletin #149 sera distribué en **juillet 2026**.

Veillez faire parvenir vos contributions à David Greenberg, davidgreenberg@alumni.uwaterloo.ca

Abonnement et désabonnement

Si vous souhaitez vous abonner à ce bulletin ou annuler votre inscription, veuillez visiter le site web:

<http://www.mailman.srv.ualberta.ca/mailman/listinfo/cnc-scor>

CNC-SCOR

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Erin Bertrand (Dalhousie)
Derek Armitage (Waterloo)
Dariia Atamanchuk (Dalhousie)

Le Comité national canadien du Comité scientifique de la recherche océanographique (CNC-SCOR) favorise et facilite la coopération internationale. Il reflète la nature multidisciplinaire de la science océanique et de la technologie marine.

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The Canadian National Committee of the Scientific Committee for Oceanic Research (CNC-SCOR) fosters and facilitates international cooperation. It is a non-governmental body that reflects the multi-disciplinary nature of ocean science and marine technology.



WWW.CNCSCOR.CA