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Respiration in the Mesopelagic Ocean (ReMO):

Reconciling ecological, biogeochemical and model estimates

Submitted by Katja Fennel, Dalhousie University

The Scientific Committee on Oceanic Research (SCOR), at their annual general meeting in October 2020, funded three new working groups to tackle timely, novel activities which will enhance global co-operation and produce fundamental scientific knowledge.

Working Group 161 on respiration in the mesopelagic ocean <https://scor-int.org/group/respiration-in-the-mesopelagic-ocean-reconciling-ecological-biogeochemical-and-model-estimates-remo/> was one of those funded, and has the ultimate aim to improve projections of the effects of global change on the decline of oxygen in the world's oceans. To achieve this, the working group will bring together experts in observation, experimentation, data analysis, and modelling to systematically compile and compare data sets of mesopelagic microbial respiration in order to constrain uncertainties and so improve quantifications of organic matter flux and remineralisation rates. The working group is co-chaired by Carol Robinson (UK), Iris Kriest (Germany) and Javier Arístegui (Spain) and includes Katja Fennel from the Department of Oceanography, Dalhousie University (<http://memg.ocean.dal.ca/fennel/>).

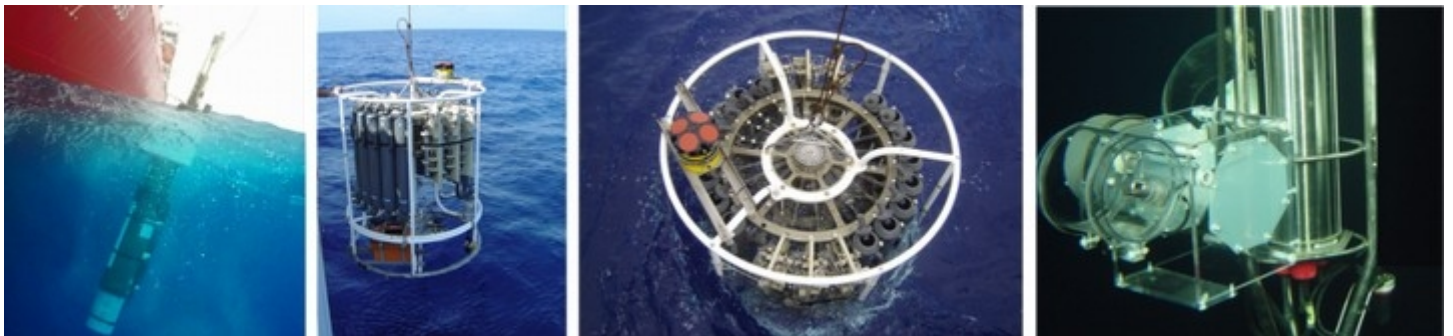


Figure 1. Instrumentation used in determining mesopelagic respiration, from left to right (with photo credits): Biogeochemical Argo float (Giorgio Dall'Olmo), two images of a CTD rosette with Niskin and pressure retaining samplers attached (Christian Tamburini), IODA6000 (In Situ Oxygen Dynamic Autosampler, rated to 6000m) deployed at 2000m since July 2009 (Dominique Lefevre)

Together with organic matter export from the surface ocean, microbial respiration in the mesopelagic realm (~200m - 1000m) determines the long-term storage of carbon in the ocean, the extent of mesopelagic deoxygenation and, ultimately, the levels of carbon dioxide in the atmosphere. Yet, microbial respiration remains one of the least constrained metabolic rates in the Earth System, with mismatches between inverse model predictions, in situ budgets and in vitro observations of up to an order of magnitude. These mismatches stem from the difficulties in quantifying microbial respiration rates in the dark ocean. However, with the dawn of novel technologies such as optodes, pressure-retaining samplers, in situ incubators, gliders, and profiling floats, we are now able to determine mesopelagic microbial respiration with unprecedented spatial and temporal coverage. However, whilst technologies have advanced substantially, efforts to bring all the data together across depth-, size-, and time-scales are still lacking. This is what this working group will do.

Over the next four years, through virtual meetings, face to face workshops, a training course and method intercomparison workshop, the working group will produce an action plan and position paper identifying the gaps in knowledge and suggesting priority research areas, collate an open access dataset and best practice methods manual, and build capacity in this vital research area. The full terms of reference, list of deliverables and timetable are given below.

If anyone is interested in finding out more, or getting involved in the activities, please contact carol.robinson@uea.ac.uk

Terms of Reference & deliverables

1. Identify, quantify and prioritise gaps in our knowledge, and prepare an action plan to reduce these gaps by reviewing available information on mesopelagic respiration

D1. An action plan to identify gaps in knowledge and propose ways to address those gaps

D2. A position paper, based on the plan, highlighting the importance of reliable estimates of mesopelagic respiration, and suggesting priority research questions

D3. A model intercomparison / data sensitivity paper

2. Develop a global dataset of mesopelagic respiration estimates, derived from the range of ecological and biogeochemical techniques available, in order to create a resource for validation of biogeochemical models including Earth System Models used for climate projection

D4. A global dataset, linked to international marine data hubs, for use by modellers, launched at a Town Hall meeting at an international conference such as Ocean Sciences

D5. A data paper in Earth System Science Data <https://www.earth-system-science-data.net/>

3. Produce a new synthesis of open ocean mesopelagic respiration

D6. A synthesis paper on a model/observational case study, and presentations at appropriate international conferences



4. Produce a best practice manual of techniques and approaches to determine mesopelagic respiration, and make recommendations as to which is the most appropriate method or combination of methods for a particular application, including best practice on how to reconcile approaches across time and space scales

D7. A best practice manual for ecological and biogeochemical methods used to derive mesopelagic respiration

D8. A method inter-comparison paper and dataset

D9. A training course on model and observational approaches to derive mesopelagic respiration for early career and experienced researchers, particularly aimed at scientists from developing nations

5. Build capacity, share knowledge and transfer technical skills, particularly to scientists in developing nations

D10. Online training materials such as lectures and practical demonstrations of analytical techniques, budgeting exercises and modelling approaches

D11. A manuscript for children on mesopelagic microbial respiration in Frontiers for Young Minds

<https://kids.frontiersin.org/>

Timetable

2020-2021 – regular virtual meetings, plan, allocate tasks, complete action plan and position paper

2021-2022 – face to face workshop, regular virtual meetings, planning for method intercomparison workshop & training course, drafting papers, collating data, best practice manual

2022-2023 – face to face workshop, regular virtual meetings, method intercomparison workshop, training course, training materials, complete best practice manual, dataset and data paper

2023-2024 – face to face workshop alongside dedicated conference session, regular virtual meetings, synthesis paper, data from intercomparison workshop, paper for school children, online training materials

MetaZooGene Barcode Atlas & Database (MZGdb)

From the [MetaZooGene Barcode Atlas webpage](#)

The first Term of Reference for SCOR WG157 (MetaZooGene) was to create an open-access web portal for DNA barcodes of marine zooplankton. This portal would include a reference database (containing a compilation of quality-checked, marine zooplankton COI barcodes) and a barcode atlas (summarizing available species COI barcoding coverage for all the major zooplankton taxonomic groups, reported by ocean or region).



Figure 1 from the paper linked below.

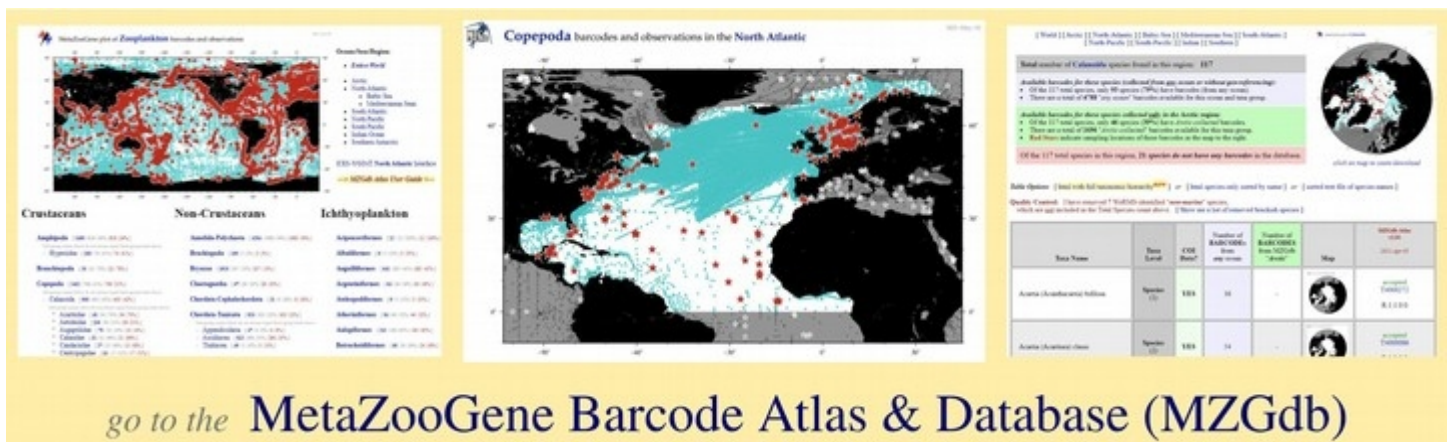
The MetaZooGene "Reference Database" and "Barcode Atlas" are now joined together into a single online product called the MetaZooGene Barcode Atlas and Database, or MZGdb for short. This combined resource summarizes the presence and barcoding status of major zooplankton groups and species, reported-by geographic regions, oceans, and seas (e.g., "North Atlantic pteropods", "Arctic calanoid copepods", "Southern Ocean euphausiids", "Mediterranean Sea decapods"). The MZGdb also lets the user download data from any of these taxonomic/geographic subsets.



For additional information about this effort, an open-access review paper is available here:

[Toward a global reference database of COI barcodes for marine zooplankton. \(Bucklin et al. 2021\)](#)

The MZGdb can be accessed by clicking on the graphic below.



Left: The MZGdb interface main menu, Centre: Map of North Atlantic copepoda and barcodes, Right: The MZGdb interface main menu

The MZGdb is collaboratively-developed product of MetaZoogene (SCOR WG157) and the Coastal & Oceanic Plankton Ecology, Production, & Observation Database (COPEPOD). MZGdb is an expansion of COPEPEDIA, a taxonomically arranged database of zooplankton observation, biometric trait, photographs, and now molecular data. Through COPEPEDIA's parent and sibling taxonomic tree structure and inter-relationships, information is stored and compiled at multiple taxonomic aggregations. For example, a user can access data from an individual species (e.g., *Calanus finmarchicus*) or just as easily get all the combined data from an entire Genus or Family or taxonomic group (e.g. all members the genus *Calanus* or family *Calanidae* or even "all copepoda").

Release of Version 1 of the FeMIPeval Ocean Model Assessment Tool

SCOR Working Group 151 (FeMIP) is pleased to announce the release of version 1 of the FeMIPeval ocean model assessment tool via this github repository:

<https://github.com/RGRJON002/FeMIPeval>

FeMIPeval is designed to facilitate the assessment of ocean iron cycle models against GEOTRACES intermediate data product 2017 (IDP2017) via a set of different skill metrics in a systematic manner.



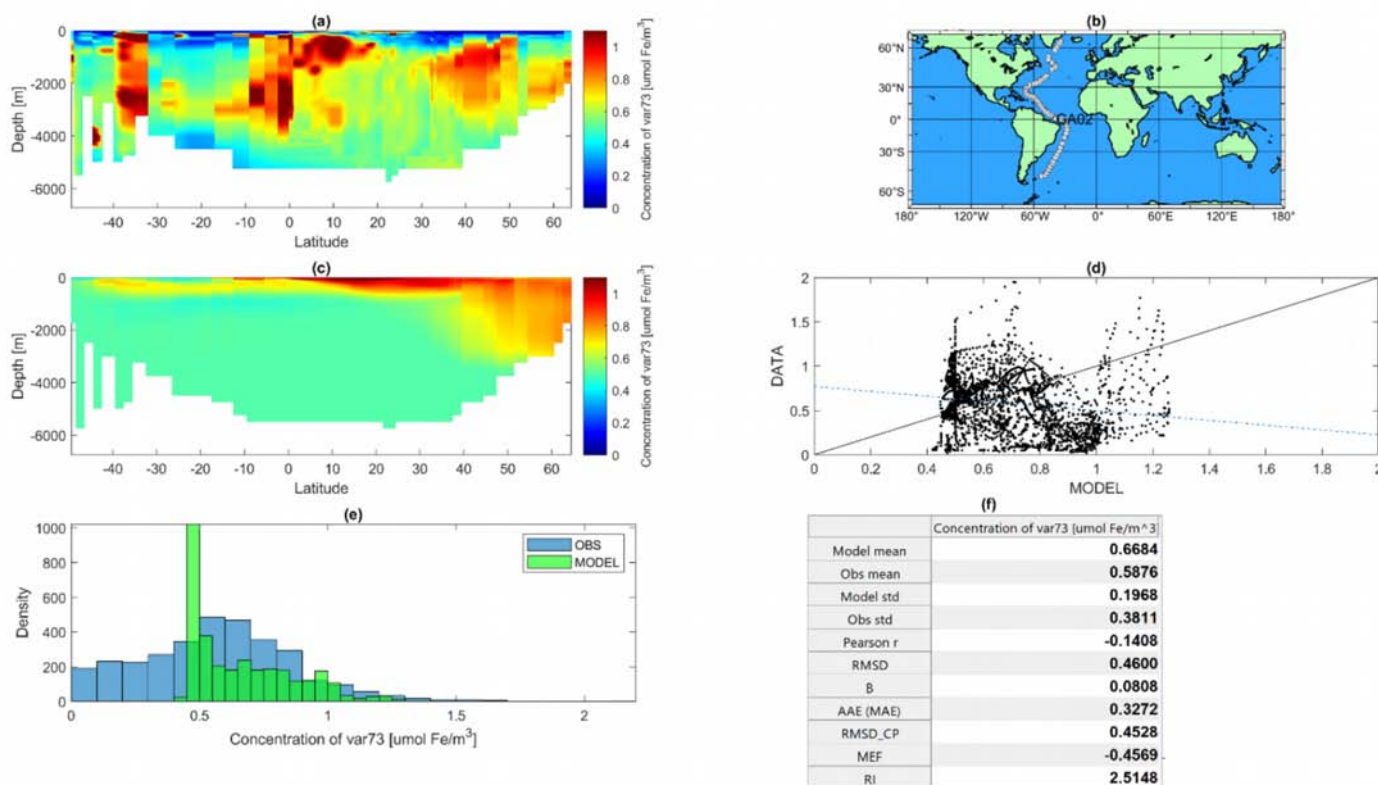
It was developed by Jonathan Rogerson and Marcello Vichi at the University of Cape Town as part of Working Group 151's activities.

FeMIPeval makes use of climate data operators and netcdf operators to manipulate model output and the GEOTRACES IDP2017 for an assessment code written in Matlab at this time. Users must download the netcdf version of the GEOTRACES IDP2017 separately.

Volunteers willing to port the scripts to other languages are very welcome and ideas/suggestions for further development should be logged as tickets and comments in the github site.

Best wishes on behalf of all members of SCOR WG151,

Alessandro Tagliabue and Stephanie Dutkiewicz (WG151 co-chairs)



From the FeMIPeval manual Figure 3: (a) Section plot along GA02 from the GEOTRACES IDP2017 for var73 (dissolved iron) (b) World map showing the section. Grey dots represent locations of full-depth CTD profiles (c) Section plot of UKSEM model output for GA02 (d) Goodness-of-Fit plot for model and observational data. Solid black line is the 1:1 line while the blue dotted is the linear regression (e) Distribution plot (f) Table of statistics scores.

2020 POMA Award to the La Perouse Program

The PICES Ocean Monitoring Service Award (POMA) recognizes organizations, groups and outstanding individuals that have contributed significantly to the advancement of marine science in the North Pacific through long-term ocean monitoring and data management. The award also strives to enlighten the public on the importance of those activities as fundamental to marine science. It draws attention to an important aspect of the PICES Convention that is less appreciated: “to promote the collection and exchange of information and data related to marine scientific research in the area concerned”.

The 2020 POMA Award recipient is the La Perouse Program led by DFO’s Institute of Ocean Sciences.



See the presentation video on [YouTube](#) (between 23:30 and 28:37) and the slides [here](#).

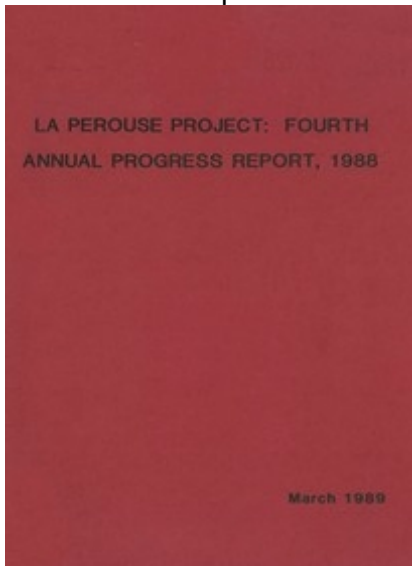
The La Perouse Program was initiated in 1979 by Dr. David Mackas of Fisheries and Oceans Canada’s Institute of Ocean Sciences, located in Sidney, BC. The sampling consists of two to four shipboard surveys each year, with between 10 to 30 stations sampled from each of four regions that circumnavigate Vancouver Island. The program has always included a full suite of physical and biological observations. All physical data are archived in the Fisheries and Oceans Canada water properties database, and are searchable through the web (Waterproperties.ca). Zooplankton data are archived by the Ocean Ecology group at the Institute of Ocean Sciences, and are freely available through the Canadian data Geoportal at <https://open.canada.ca>.

The surveys often include training and experiences to students and early career researchers. Since 1979 over 60 students and early career researchers have participated in the surveys of the La Perouse program.



The zooplankton data from the La Perouse program have contributed to both the NOAA COPEPOD database and the IOC-UNESCO International Group for Marine Ecological time Series (IGMETS) project (<http://igmets.net/>).

More than 100 publications have resulted from research done on the La Perouse surveys. Twenty-three additional reports have provided contributions to the Canada's State of Pacific Ocean Reports. To see how the program has contributed to our knowledge of the area, compare [LA PEROUSE/MASS PROJECT EIGHTH ANNUAL PROGRESS REPORT 1992](#) and [this 2019 report](#).



It is well deserved that the La Perouse survey program is being recognized by PICES for the 41 years of surveys that they have accomplished since 1979. Key personnel associated with the program since 1979 include Dr. David Mackas, Mr. Rod Forbes, Mr. Douglas Moore, Mr. Douglas Yelland, Ms. Moira Galbraith, Ms. Kelly Young, Ms. Nina Nemcek, Ms. Marie Robert, Dr. Ian Perry, Dr. Angelica Peña, Dr. Ken Denman and many others too numerous to mention. Dr. Akash Sastri is currently responsible for leading the La Perouse surveys. Congratulations to all involved.

The UN Decade of Ocean Science for Sustainable Development

CNC-SCOR, CMOS and other Canadian Scientific Societies for a Canadian Community of Practice

Paul Myers, Chair CNC-SCOR, Marek Stastna, President CMOS

On 5 December 2017, the United Nations declared that a Decade of Ocean Science for Sustainable Development would be held from 2021 to 2030. The purpose of the Decade is to provide a common framework to ensure that ocean science can fully support individual countries' efforts to achieve the UN's 2030 Agenda for Sustainable Development.



The Decade will provide a 'once in a lifetime' opportunity to create a new foundation, across the science-policy interface, on which to strengthen the management of our oceans and coasts for the benefit of humanity.

The ocean respects no borders, and the Decade will strengthen the international cooperation needed to develop the scientific research and innovative technologies that can connect ocean science with the needs of society. It will also contribute to the UN processes protecting the ocean and its resources, such as the Aichi Biodiversity targets, the SAMOA Pathway, the United Nations Convention for the Law of the Sea and the Sendai Framework for Disaster Risk Reduction.

The Decade will require the engagement of many different stakeholders to create new ideas, solutions, partnerships and applications, these include: scientists, governments, academics, policy makers, business, industry and civil society.

Further details on the UN Decade can be found in various documents, such as the Decade Implementation Plan Summary put out by the International Oceanographic Commission (IOC), and available through the UN Decade website <https://www.oceandecade.org/>.

Such an event should lead to many opportunities for the Canadian marine science community, whether through linking our activities to the UN Decade, using it to help build regional, national and international partnerships, or using the UN Decade to develop outreach activities to show Canadians the importance of the ocean, and the strength and value of Canadian marine sciences research.

Canada is a world leader, especially given its population, in marine sciences research (Figure 1). Yet, to allow this strong Canadian community to fully take advantage of the opportunities associated with the UN Decade requires information sharing and open and broad communication, as well as coordination. Despite the decade already officially starting (Jan 2021), informal surveys suggests many Canadian marine scientists don't know about the decade, or how they could become involved.

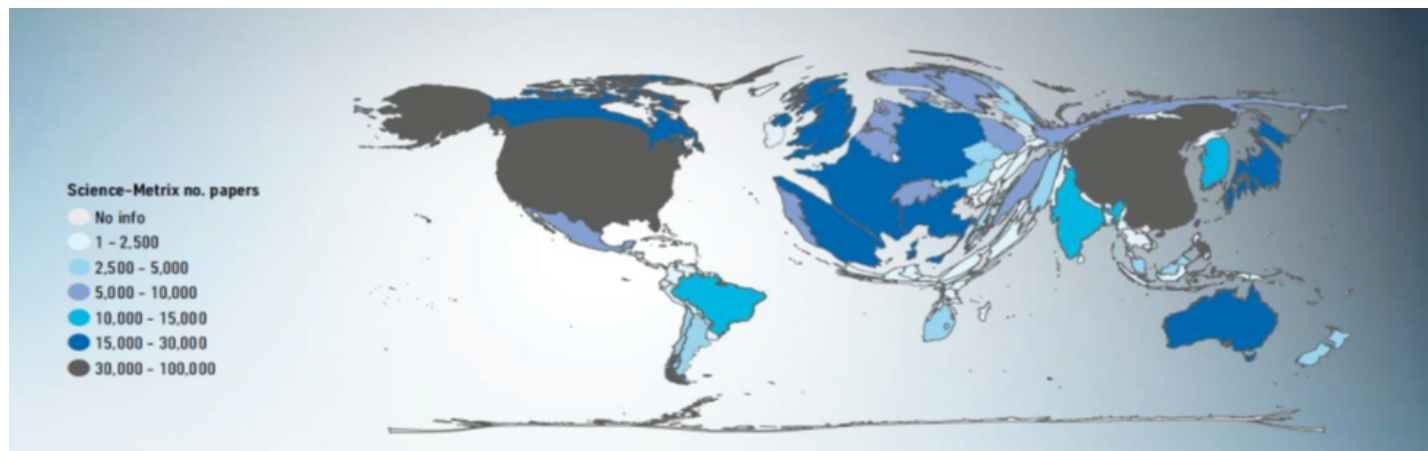


Figure 1: Publication map of the world. The area of each country is scaled and resized according to the number of ocean science publications. Different colours indicate a different number of publications. Taken from the “Science We Need for the Ocean We Want” UN Decade document IOC/BRO/2018/7 REV.

Although Canadian scientists study every ocean in the world, the Canadian ocean science community is broad and spread across the country. This will require co-ordination to meet the opportunities and challenges presented by the Ocean Decade. The federal government, through the Department of Fisheries and Oceans (DFO) has taken a first step of hiring a Lead, and holding planning workshops, to help their involvement in the UN Decade, with a goal to assist with communication and outreach. This is a welcome step, but the marine sciences community in Canada spans academia, industry, foundations and non-governmental organizations (NGOs), as well as other departments within the federal government. Bringing these organizations together is important for involvement in the UN Decade to be inclusive across all interested parties within marine sciences in Canada.



A focus here is to develop a Forum or Community of Practice, including a web based platform that shares information and opportunities about UN Decade activities to Canadian scientists, early career researchers and HQP interest in becoming entrained in those international activities. It will also act to communicate interests of Canadian researchers interested in international

activities to those international groups that want to entrain Canadians. In general, the goal of the forum is to aid communication and coordination among Canadians, especially those in academia, with UN Decade activities. At least initially, some support for such a Forum will come from MEOPAR (Marine Environmental Observation Prediction & Response Network).



Activities may include: Development of Forum website, to provide information on the UN Decade, ongoing programs, Canadians involved, opportunities, etc.; Regular newsletter (and potential slack channel - or other equivalent tool) for sharing UN Decade related information - exact technology used would be decided as the Forum moves forward; Forum discussion space for people to suggest ideas, concepts, open discussions on given topics, etc.; Coordination meetings with DFO to ensure linkage and coordination of endeavours; Panels and special sessions during relevant meetings (initially virtually), such as the upcoming CMOS Congress; Separate virtual space for early career scientists and students/postdocs (HQP) to interact.

If you have thoughts on these potential activities, please contact:

CNC-SCOR via its chair, Paul Myers (pmyers@ualberta.ca) or CMOS via its President, Marek Stastna (mmstastna@uwaterloo.ca).

This section of your newsletter provides an opportunity to highlight your research programs to the Ocean Science Community.

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

Mettez en valeur vos programmes de recherche en publiant un article dans cette première section de votre bulletin.

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

MEETINGS

CMOS Congress Update - 2021-05-07

May 31 - June 11. On line

[CMOS](#) is looking forward to welcoming you to [Congress 2021](#), which starts on Monday May 31.

Register Now. The very affordable full registration costs \$200/\$100 (full member/ student or retiree). Non-CMOS Member charges are \$300/\$200, but note membership is \$95/\$66 (regular/retired) and student membership is still free.

Visit the [registration page](#) for more information. Save more than the registration difference by [joining CMOS](#).

To date, there are over 645 registered for the Congress.

Congress 2021 Scientific Program Update

A very full Scientific Program is now in the final stages of preparation, including:

- 371 oral papers and 64 poster papers presented in 83 individual scientific sessions, using twice-daily individual 90 minute time slots over the ten days from May 31 to June 11
- 8 plenary scientific talks (see list of speakers and titles, below)
- The Public Speaker Lecture will be presented on Wed., June 2 by Gavin Schmidt, Director of NASA's Goddard Institute for Space Studies in New York, and recently appointed as the NASA Senior Climate Advisor to the White House. Dr. Schmidt will speak on "Can climate modeling keep up with climate change?"
- A Symposium on 150 Years of Weather Services in Canada in the form of three Panel Sessions (see below for more information)
- A Town Hall on Canada and the UN Decade of Ocean Science for Sustainable Development

These papers address a wide range of important scientific topics spanning meteorology, oceanography and related environmental sciences.

[Guidelines](#) for Presenters at the Congress are now available.

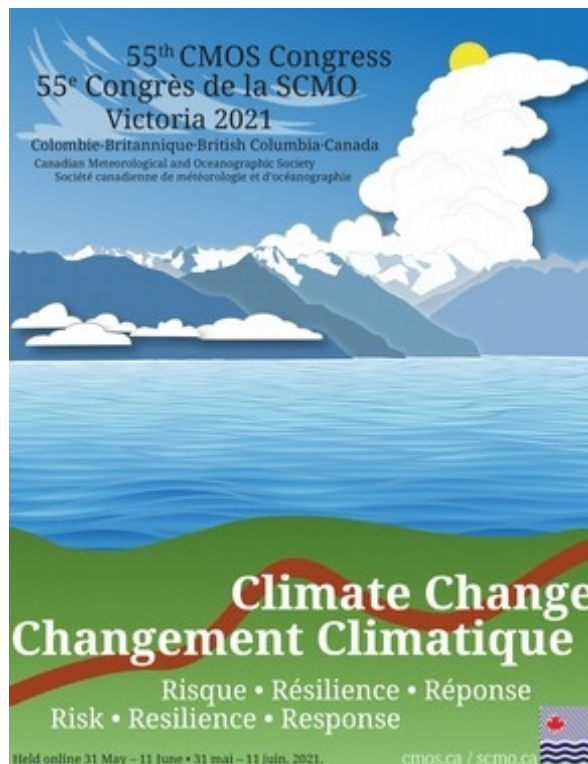
The presentations will be 'live' in real-time. However, these live presentations will be recorded and posted on the Congress virtual platform, so if you cannot attend a presentation of interest, it will be available for viewing within a day or two (for up to one year after the Congress has ended).

The presentations will be fully interactive, including the poster papers. Time for Questions and Answers and Discussion will be included in the program.

The full scientific [program](#) is available.

There are Many Other Congress 2021 Activities including:

- Four Major Sponsors and 15 Exhibitors with booths, allowing visits and enabling discussions during the two weeks of the Congress; 30 minute time slots are provided each day for visits to the Booths and Networking;



- Networking Events include an Icebreaker Event on Monday May 31 and a Student Event on Tuesday June 1 as well as three 30 minute Career Development Seminars for Students;
- An Educators' Day (Friday June 4) for Teachers and Others involved in childhood education including hands-on activities and ideas on how to address climate change in the classroom



Canadian
Meteorological and
Oceanographic Society

La Société Canadienne
de Météorologie et
d'Océanographie

- The Annual CMOS Awards Ceremony on Wednesday, June 9
- Opening Remarks from the Federal Ministers of Environment and Climate Change Canada, Fisheries and Oceans, the BC Minister of Environment and Climate Change and the Mayor of Victoria BC

For More Information, please contact:

David Fissel, Local Arrangements Committee Chair (dfissel@aslenv.com)

Matthew Asplin, Local Arrangements Committee Vice-Chair (masplin@aslenv.com)

Ken Denman, Scientific Programme Committee Chair (denmank@uvic.ca)

Iron at the Air-Sea Interface Workshop

July 26-30, 2021, Asheville, NC. On site and online

Aerosol labile iron (LFe), the fraction of total aerosol iron that contributes to the dissolved Fe (DFe) inventory of the ocean, is a crucial source of the micronutrient Fe to the remote marine environment. Current models for the ocean biogeochemical cycling of Fe assume that after deposition to the surface ocean, all aerosol-LFe gets chelated by “free” marine organic ligands and gets converted to DFe. Yet laboratory studies and numerical simulations have shown that after deposition to the ocean only a small fraction of LFe may be chelated by marine organic ligands and enter the DFe pool. This happens because the free ligand concentration in the dust-affected region of the ocean gets quickly exhausted and the short lifetime of inorganic LFe in seawater does not allow for replenishment of organic ligands by the surface ocean vertical mixing and/or biological production and release. The efficiency of LFe to DFe conversion is one of the major unknowns for the global biogeochemical cycling of Fe.



Goals and expected outcomes of the workshop:

- A white paper that will provide a workshop assessment report based on the consensus reached by diverse researchers from the oceanographic and atmospheric science communities with backgrounds in the laboratory and in situ measurements, modeling, and remote sensing.
- A breakout session at AGU 2021 fall meeting to disseminate the workshop findings to the wider research community interested in the global biogeochemical cycling of iron.

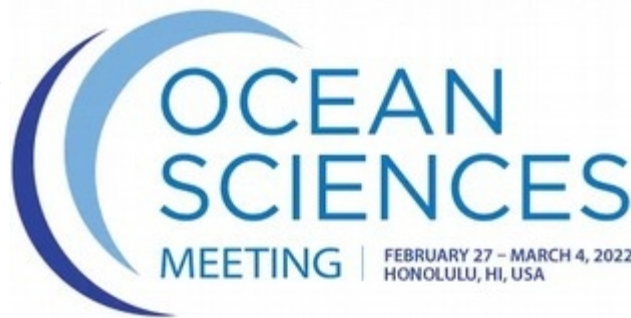
[Details](#)

[Registration deadline June 25](#)

Ocean Sciences Meeting

February 27 - March 4, 2022, Honolulu, HI. On site and online

Co-sponsored by the American Geophysical Union ([AGU](#)), the Association for the Sciences of Limnology and Oceanography ([ASLO](#)), and The Oceanography Society ([TOS](#)), Ocean Sciences Meeting (OSM) is the global leader in ocean sciences conferences. We are creating a meeting and networking environment that provides opportunities for ocean scientists, from those doing basic research to those working on solutions for the ocean we want, to present and share knowledge as well as network and address emerging topics in ocean sciences.



While many participants will physically gather in Honolulu, the Program Committee anticipates a large global gathering to virtually attend online programming and events. The tradition of outstanding presentations and knowledge-sharing, through plenary speakers, in oral sessions, and in serendipitous conversations, will continue during OSM 2022.

[Details](#)

Submission of abstracts **deadline September 2021**

Oceans from Space

October 11-15 2021, Venice, Italy

The 5th "Oceans from Space" Symposium will take place in Venice, Italy, at the Scuola Grande di San Marco, on 11-15 October 2021. As in past events, the new Symposium will focus on the major scientific and technological achievements, innovations and challenges of Ocean Observations from space. The Symposium themes invite to look ahead, beyond traditional approaches, and define novel uses, activities and services to advance the exploration of oceans on Earth, as well as on other planets.



The Symposium scientific themes shall cover all aspects of oceanographic remote sensing, including both passive and active techniques, in the visible, infrared and microwave spectral regions. Special attention will be placed on the fusion of optical, thermal and structural data, and on future perspectives. General themes will be space missions, satellites & sensors, calibration & validation, algorithms & models. Applications will include sea parameters and processes, bio-geo-chemical cycles and ecological status, from local to global scales.

[Details](#)

Abstract **deadline June 30 2021**

*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*

POSITIONS AVAILABLE

2 Postdocs mixed-layer dynamics

DFO, UVic, UBC

Applications are invited for a two-year postdoctoral fellowship (PDF) to study mixed-layer dynamics and coastal-offshore exchange mechanisms in the Northeast Pacific using a diverse collection of ocean observations including ocean glider, Argo float, ship-based, and satellite data.



**University
of Victoria**



The project aims to use the diverse set of ocean observations described above to better understand the physical oceanographic processes that have the potential to influence salmon in the Northeast Pacific with a focus on mixed-layer dynamics and coastal-offshore exchange mechanisms.

Preferred start date is November 2021

[Details](#)

Review of applications started May 15, open until filled.

Professor of Biology and Scientific Director of the Ocean Tracking Network

Dalhousie University

The Faculty of Science at Dalhousie University invites applications for a tenured Full Professor of Biology to serve as the new Scientific Director of the Ocean Tracking Network (OTN, <https://oceantrackingnetwork.org>). The primary faculty appointment will be in the Department of Biology with potential cross-appointments in other departments across the university such as Oceanography, Marine Affairs, Mathematics and Statistics, and/or Computer Science.

The successful candidate will be appointed as a Full Professor within the Department of Biology and as such will report through the Chair of the Department to the Dean of the Faculty of Science. They will also be appointed as Scientific Director of OTN and in this capacity will report to Dalhousie's Vice-President of Research and Innovation, OTN's external governing Council, and to CFI and other supporting organizations on the activities and progress of OTN. As Scientific Director the successful candidate will provide leadership for OTN strategic planning and facilitate and grow scientific activities, leveraging the assets of the network and seeking mutually beneficial partnerships and synergies with other science networks and groups. The Scientific Director also leads the internal OTN management team, and oversees the management of 22+ permanent staff, as well as rotating interns and co-op students working on operations and maintenance activities



**DALHOUSIE
UNIVERSITY**

[Details](#)

Review of applications starts Sept 15, 2021, open until filled.

Postdoc Optimizing Earth Observation data for ice sheet modelling

DTU Space Copenhagen, Denmark

If you want to develop your career as a scientist and you are looking for a challenging and exciting opportunity to fulfill your dreams and ambitions within the assessment of sea level rise and climate change, it is right here in front of you. At DTU Space we seek applicants for a Postdoc position starting in September 2021 (or as soon as possible hereafter) on the topic of “Optimizing Earth Observation data for ice sheet modelling”.

DTU Space
National Space Institute

The position will be anchored in the cryosphere research group, within the Geodesy and Earth observation division at DTU Space. We have a strong focus on cryosphere changes, both from Earth Observations (radar satellite altimetry, lidar, gravity), airborne and in-situ campaigns. We are currently active in several national and international projects where we work on developing, implementing, and validating methods for using satellite data to map the recent and current changes of the Earth’s cryosphere.

[Details](#)

Deadline 1 August 2021 (Danish time)

Assistant Professor (tenure track) in Limnogeology and Global Changes

University of Geneva

Duties include teaching at undergraduate and postgraduate level (limnogeology, paleoclimatology, paleoceanography, sedimentology), including field courses (geology, field data acquisition). Moreover, the successful candidate will supervise masters’ and doctoral theses, will have to fulfil management and organizational duties within the institution.

Candidates must demonstrate a capacity and potential to undertake high quality research, to obtain competitive research funding, and to publish in peer-reviewed top international research journals. A demonstrated potential for teaching and for supervising master and doctoral theses is required.

A good command of both French and English language is preferable. If French is not the native language, teaching ability in French has to be acquired within two years of the appointment.

[Details](#)

Deadline August 31, 2021 (23:59 Geneva time)



**UNIVERSITÉ
DE GENÈVE**

Assistant Professor (tenure track) Oceanography

College Station, Texas

The Department of Oceanography at Texas A&M University is seeking applications for a full-time tenure-track faculty position with a 9-month academic appointment at the rank of Assistant Professor. The successful candidate should apply observational, experimental, theoretical, analytical, data-science, or modeling methods to make new and innovative oceanographic discoveries. We welcome applications from individuals with expertise in any area of oceanography, including those that would enhance interdisciplinary initiatives. We particularly welcome applications from individuals with demonstrated commitment to diversity, equity, and inclusion with disciplinary interests in biogeochemical/Earth system modeling, marine ecology, or marine sedimentology/geophysics, and/or who can leverage existing TAMU Geoscience Centers of Excellence listed below.

The successful applicant will be expected to teach courses in the Department of Oceanography at the graduate and undergraduate levels; advise and mentor graduate and undergraduate research students; develop and maintain an independent, externally-funded research program; participate in departmental and college activities; and serve the discipline of oceanography.

The Department of Oceanography, located in College Station, Texas, is part of an alliance of Ocean Sciences that includes the Marine Sciences and Marine Biology Departments at TAMU Galveston, the Geochemical and Environmental Research Group, the International Laboratory for High-Resolution Earth System Prediction, the International Ocean Discovery Program, the Gulf of Mexico Coastal Ocean Observing System, and Texas Sea Grant.

[Details](#)

Review of applications starts September 1, 2021, open until filled.




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


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

GENERAL OERA Webinar Series

The [Offshore Energy Research Association](#) (OERA) [Seminar series](#) continues





OERA webinar series



Marine Mammal Observer Program
Whale Tails & Other Stories
of the Outer Bay of Fundy


COURTNEY TROWSE, SOAR - SUSTAINABLE OCEANS APPLIED RESEARCH
SHELLEY LONERGAN, BRIER ISLAND WHALE AND SEABIRD CRUISES


 THURSDAY, JULY 22 | 1PM AST | REGISTER AT oera.ca/OUTREACH



The Pathway Program:
Defining approved environmental
monitoring for ocean energy projects

LUIZ FARIA, OERA
DAN HASSELMAN, FUNDY OCEAN RESEARCH CENTER FOR ENERGY (FORCE)

 THURSDAY, AUGUST 19 | 1PM AST | REGISTER AT oera.ca/OUTREACH



Omics based analysis of Nova Scotia
deep water marine sediments sheds
light on life in seabed hydrocarbon seeps

DR. JAYNE RATTRAY
UNIVERSITY OF CALGARY

 THURSDAY, SEPTEMBER 23 | 1PM AST | REGISTER AT oera.ca/OUTREACH

[Register](#)

Call for review of 2021 SCOR Working Group proposals

Five working group proposals were submitted to the SCOR Secretariat for consideration at the 2021 SCOR Annual Meeting. The proposals are available in the report of the Annual General Meeting on the SCOR Web site [here](#).

The proposals are:

2.1.1. Coupling of ocean-ice-atmosphere processes: from sea-ice biogeochemistry to aerosols and Clouds ([CIce2Clouds](#))

2.1.2. Harnessing global pELagic FISH biochemical data to address Sustainability challenges under climate change scenarios ([ELFISH](#))

2.1.3. Advancing standardisation of COastal and Nearshore demersal fish visual CENSUS techniques ([CoNCENSUS](#))

2.1.4. Mixotrophy in the Oceans - Novel Experimental designs and Tools for a new trophic paradigm ([MixONET](#))

2.1.5. From the Ocean to the Lab to the Ocean: best practices for ecologically sound inferences in fluctuating habitats ([OLO](#))

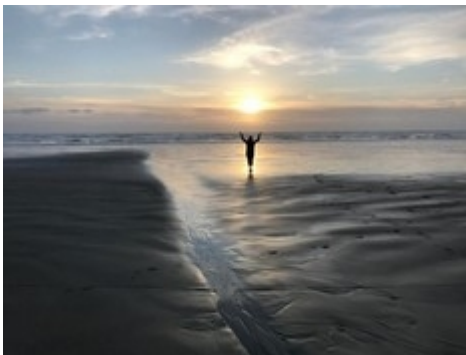
SCOR has a review [template](#) and [instructions](#) to guide the review.

Usually up to two of these, depending on quality of the proposal and funding availability, will be funded at the Annual SCOR meeting to be held this fall. Comments from any interested scientist are welcomed. Comments can be sent to CNC-SCOR, either via the Chair (Paul Myers, pmyers@ualberta.ca) or the Secretary (David Greenberg, david.greenberg@dfo-mpo.gc.ca). Comments received by July 12, 2021 will be used to assist with the Canadian process of ranking the Working Group proposals.



World Ocean Day

Celebrations of World Ocean Day 2021 are understandably muted, but there are some events online and a few in person.



See the events [registered for Canada](#) on the World Ocean Day [website](#).

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

Previous newsletters may be found on the [CNC-SCOR](#) web site.

Newsletter #119 will be distributed in **July 2021**.

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

Subscribing and Unsubscribing

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Les [bulletins](#) antérieurs se retrouvent sur le site web du [CNC-SCOR](#).

Le Bulletin #119 sera distribué en **juillet 2021**.

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

Abonnement et désabonnement

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

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

CNC-SCOR

Members/ Membres

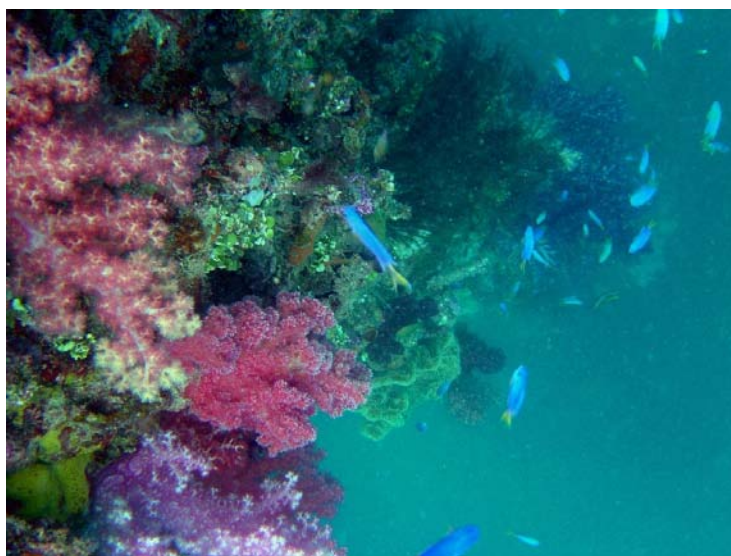
Paul Myers – Chair (U Alberta)
Rob Macdonald – Past Chair (DFO-IOS)
David Greenberg – Secretary (DFO-BIO)
Markus Kienast (Dalhousie)
Michael Scarratt (DFO-IML)
Paul Snelgrove (Memorial)
Stephanie Waterman (UBC)
David Fissel (ASL)

Le Comité national canadien du Comité scientifique de la recherche océanographique (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 multidisciplinary nature of ocean science and marine technology.



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