

Ocean Science Day 2025

Programme

33rd Session of the IOC Assembly
30 June 2025
Room II



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Intergovernmental
Oceanographic
Commission



**2021
2030**

United Nations Decade
of Ocean Science
for Sustainable Development

10:00–10:20

Welcome and Introduction
Mr **Vidar Helgesen**, UNESCO-IOC Executive Secretary
Dr **Karen Evans**, Head of Ocean Science Section, IOC

10:20–10:50

Keynote: Introduction to “Ocean Solutions for Mitigating Climate Change”
Dr **Chris Vivian** - Co-chair of GESAMP Working Group 41 on Ocean Interventions for Climate Change Mitigation

10:50–11:30

Panel 1: Deep Dive into Ocean Solutions
Moderator: Dr **Karen Evans**, Head of the Ocean Science Section, IOC

Nature-Based Solutions – **Richard Bellerby**, Chief Scientist for Oceans and Climate, Norwegian Institute for Water Research (NIVA)

Marine Carbon Dioxide Removal (mCDR) – **Jerry Blackford**, Principal Scientist at Plymouth Marine Laboratory

Reoxygenation – **Andreas Oschlies**, Professor of Marine Biogeochemical Modelling, GEOMAR and The University of Kiel

11:30–11:50

Break

11:50–13:00

A. Bruun Memorial Lecture
Moderator: **Karen Evans**, Head of Ocean Science Section, IOC
Co-Producing Ocean Solutions: Empowering Coastal Communities Through Science and Policy Integration - Prof Dato' Dr **Aileen Tan Sau Hwai**, Director of the Centre for Marine and Coastal Studies at the Universiti Sains Malaysia

15:00–16:00

N.K. Panikkar Memorial Lecture

Moderator: Dr **Karen Evans**, Head of the Ocean Science Section, IOC
*Building Capacity towards Operational Oceanography
in the Black Sea* - Dr **Atanas Palazov**, Professor of Operational
Oceanography and former Director of the Institute of Oceanology at the
Bulgarian Academy of Sciences

16:00–16:30

Panel 2: Risks, Governance Gaps and Science Priorities

Moderator: Dr **Kirsten Isensee**, Programme Specialist for Ocean Carbon Sources &
Sinks, Ocean Science Section, IOC

Nature-based Solutions – Prof **William Austin**, Professor, University of St Andrews

Marine Carbon Dioxide Removal (mCDR) –Dr **Miranda Boettcher**, Research
Associate, German Institute for International and Security Affairs (SWP)

Reoxygenation – Prof **Marilaure Grégoire**, Full Professor in Marine System
Modelling, Liège University

16:30–16:45

Break

16:45–17:55

Mário Ruivo Memorial Lecture

Moderator: Ms **Alison Clausen**, Programme Specialist,
Marine Policy and Regional Coordination Section, IOC
The LittleFish-STP project -
Dr **Vânia Baptista**, Junior Researcher
at Centre of Marine Sciences of the University of Algarve (UALg)

17:55–18:00

Closing Remarks
Dr **Yutaka Michida**, IOC Chairperson

Dr Chris Vivian

Dr Chris Vivian is currently a co-chair of GESAMP Working Group 41 on 'Ocean Interventions for Climate Change Mitigation'. He retired from Cefas, the Centre for Environment, Fisheries and Aquaculture Science (an agency of the UK Department for Environment, Food and Rural Affairs) in October 2016 where he had 30 years' experience in an advisory role to UK Government on national and international issues relating to the environmental impacts of various human activities in the marine environment. From 1989, he was a UK delegate in international meetings under the OSPAR and London Conventions dealing with waste disposal at sea in the North-East Atlantic and the whole world respectively. He was the Chair of the Scientific Groups of the London Convention and London Protocol from 2008 to 2011 and was the Chair of the OSPAR Convention's Biodiversity Committee. At the London Convention/Protocol meetings Chris was involved in the discussions on marine geoengineering from 2007 and chaired the working group that finalised the amendments to the London Protocol on marine geoengineering in 2013. He received a BSc in Geology and Oceanography in 1971 and a PhD in Marine Geochemistry in 1975, both from the at University College of Swansea.

Prof Richard Bellerby

Prof. Richard Bellerby is Chief Scientist for Oceans and Climate at the Norwegian Institute for Water Research, Bergen, Norway, Adjunct Professor at UCSI University, Kuala Lumpur, Malaysia and Director of the SKLEC-NIVA Centre for Coastal and Marine Research, East China Normal University, Shanghai, China. He has an educational background in Fisheries and Ocean Science and a PhD in Marine Chemistry. His research explores the interplay between ocean biogeochemistry and climate change, nature-based solutions, socioecological systems and science policy documented in over 160 scientific publications. He is co-lead of the IMBeR-Future Earth Coasts Continental Margins Working Group, member of the Arctic Council Climate Expert group and leader of the AMAP Ocean Acidification working group; He is an Executive Committee member of the Global Ocean Acidification observing network (GOA-ON) and co-champion for Outcomes 2 (Science to Action) and 5 (Future Predictions) on the UN Decade Ocean Acidification Research for Sustainability (OARS) program.

Prof. Jerry Blackford

Prof Jerry Blackford is a principal scientist with a 34-year career specialising in marine system modelling at Plymouth Marine Laboratory, leading the modelling group for the last 10 years and holding an honorary professorship at Exeter University. He is particularly interested in the interaction of CO₂ with marine systems, focussing on Climate Change and Ocean Acidification, environmental risk assessment and monitoring research for Carbon Capture and Storage (CCS) and more recently marine Carbon Dioxide Removal (mCDR). Jerry has led the development of local and regional scale projections for climate and ocean acidification studies and has pioneered the international development of environmental studies relating to offshore geological carbon storage, leading the world's first controlled CO₂ release project and publishing extensively. More recently he is taking the learnings from CCS impact and monitoring development, applying these to mCDR approaches. He is currently leading the UN World Ocean Assessment chapter on geoengineering and mCDR. He has been a principal investigator in more than 25 national and EU scientific projects developing marine system models for both applied and theoretical research, having published over 70 papers with an H index of 36. He provides advice to UK government departments (e.g. DESNZ, Defra, Marine Management Organisation), international organisations (e.g. ICES, IPCC, UN), industry and environmental NGOs on issues related to climate change, CCS and CDR.

Prof Andreas Oeschlies

Andreas Oeschlies is Professor of Marine Biogeochemical Modelling at GEOMAR and the University of Kiel, Germany. Having studied Theoretical Physics at Heidelberg and Cambridge, he moved into Oceanography for a PhD in Kiel and worked as PostDoc in Toulouse, Assistant Professor in Kiel and Professor of Physical Oceanography in Southampton, before becoming head of the Marine Biogeochemical Modelling group in Kiel in 2006. His research interests include the global carbon, nitrogen and oxygen cycles, their sensitivities to environmental change, and the development and quality assessment of numerical models appropriate to investigate these. He was chair of the Collaborative Research Centre "Climate-Biogeochemistry Interactions in the Tropical Ocean" (SFB754) investigating ocean deoxygenation and initiated the Kiel Declaration on Ocean Deoxygenation, and he is co-Chair of the Global Ocean Oxygen Network (GO2NE) and the Global Ocean Oxygen Decade (GOOD) program. He has led the Priority Program "Climate Engineering: Risks, Challenges, Opportunities?" (SPP1689) and currently is co-chair of the German Marine Research Alliance research mission "Marine carbon sinks in decarbonization pathways" (CDRmare).

Prof Dato' Dr Aileen Tan Shau Hwai, FASc

Aileen Tan is the Director of Centre for Marine and Coastal Studies (CEMACS), Universiti Sains Malaysia; Fellow of Academy Science Malaysia, Chair of UNESCO Intergovernmental Oceanographic Commission of the Sub-Commission of the Western Pacific (IOC WESTPAC); and Executive Director of the Asia-Pacific University-Community Engagement Network (APUCEN). She also sits in the Board of Trustees of Partnership for Observations of the Global Oceans (POGO). She serves as international steering committee in several organisations such as CoastPredict, GO2NE, Global Ocean Corps, Global Partnership on Plastic and Marine Litter; MarineLife 2030, OBON and EquiSea. Besides being the first female President of the 63-year old UNITAS Malacologica in year 2013-2016; Aileen Tan is also the first female Chair of IOC WESTPAC since the inception of the sub-commission in 1979. She is also the first Malaysian scientist who has successfully culture the tropical oysters and giant clams from eggs and sperms through artificial spawning. Her field of expertise is in marine science, specializing in mariculture and conservation of molluscs, promoting sustainable aquaculture, to create an impactful sustainable income for the local communities, besides creating a balance between profit and environment protection. She believes strongly in translating her knowledge and benefitting the communities with research findings, creating a better tomorrow for all.

Dr Atanas Palazov

Dr. Atanas Palazov is a professor of "Operational oceanography" and former Director of the Institute of Oceanology at the Bulgarian Academy of Sciences (2007-2015, 2024). His scientific activities include: coordinator of more than 30 national and international projects (NATO SfP, FP6, FP7, H2020, CBC, EEA, Copernicus Projects etc.) and participant in 40 projects. Leader of CMEMS (EU Copernicus Marine Environment Monitoring Service) "Black Sea Monitoring and Forecasting Center" project, coordinator of two EEA supported projects (IMAMO, MARLEN) and EMODNET Black Sea Checkpoint project. He is the initiator and founder of NOMOS, the National Operational Marine Observing System of Bulgaria, as a part of the Black Sea Observing System. Prof. Palazov was a Vice chairman of the Intergovernmental Oceanographic Commission of UNESCO (2011-2015), a member of IOC/GOOS Steering Committee (2016-2020) and a member of the General assembly of the Bulgarian Academy of Sciences (2007-2015). He is a Member of EOOS (European Ocean Observing System) Operations Committee, member of the Council of the European Research Infrastructure Consortium "Euro-Argo" and member of the Black Sea GOOS Committee. He is also a Chairman of the National Oceanographic Commission. Areas of scientific experience: Operational Oceanography, Marine explorations, Data collecting and processing, Marine policy.

Prof William Austin

William (Bill) Austin is Professor at the Scottish Oceans Institute, University of St Andrews (Scotland, UK); he also holds a visiting chair appointment at the Scottish Association for Marine Sciences, where he is Professor of Marine Geosciences. He has held research fellowships from the Royal Society of London, the Royal Society of Edinburgh and is a founding member and continues to serve (now as Chair) on the UK Natural Environment Research Council (NERC) Peer Review College. Bill is Chair of the Scottish Blue Carbon Forum (Scottish Government), sits on the steering group of the Scottish Forum on Natural Capital and leads the United Nations Decade Programme for Blue Carbon in the Global Ocean (GO-BC), with support for the GO-BC secretariat at St Andrews from the UK Government through Defra. Bill also supports the science working groups of the Blue Carbon Initiative and the Global Mangrove Alliance. At St Andrews, Bill is Director of the University's Blue Carbon Research Centre and leads the Blue Carbon Academy which delivers in-country capacity building and sustainable partnerships through the training of early career researchers across the globe.

Dr Miranda Boettcher

Miranda Boettcher is a Research Associate at the German Institute for International and Security Affairs (SWP) in Berlin, and an Adjunct Assistant Professor at the Copernicus Institute of Sustainable Development, Utrecht University in the Netherlands. She combines her expertise in Global Environmental Politics, the Sociology of Knowledge, and Foresight to analyze the emergence and legitimization of future policy options at the ocean-climate nexus. She is currently a Project Leader on the German-government (BMBF)-funded project ASMAYSYS-II-C, assessing the potential of marine carbon removal, with a focus on future policy and governance pathways. Additionally, Miranda is a member of the United Nations Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) Working Group 41: Ocean Interventions for Climate Mitigation and a Review Editor for the UNEP GEO-7 report. She is currently an Earth System Governance Research Fellow. She was an Oxford Martin Visiting Fellow at the University of Oxford's Institute for Science, Innovation and Society in 2018, and a Visiting Researcher at the Australian-German Climate and Energy College at the University of Melbourne in 2019. She has previously worked as a Research Associate at the Institute for Advanced Sustainability Studies in Potsdam, Germany, Research Analyst for Foresight Intelligence in Berlin, Germany, an Investigator at the Mintz Group in San Francisco, USA, and a Graduate Researcher at the University of Heidelberg's Department of International Relations in Heidelberg, Germany.
SWP | UU | BMBF mCDR Project | LinkedIn | Google Scholar

Prof Marilaure Grégoire

Marilaure Grégoire is Full Professor in marine System Modelling at the Liège University. She is graduated in physical engineering and has a PhD on the numerical modelling of the Black Sea physics and biogeochemistry. She leads the Modelling for Aquatic Systems (MAST) research group devoted to the development of models coupling the physics and biogeochemistry for forecasting the marine environment and for understanding how climate change and, in particular, deoxygenation affect marine ecosystems. She is particularly interested in the modelling of low oxygen environments and in assessing how data from new in-situ platforms and satellite sensors can be assimilated to improve model performances. Between 2016-2023, she was co-chairing the Global Ocean Oxygen Network (GO2NE) of IOC -UNESCO and the Global Ocean Oxygen Decade program (GOOD). She is co-leading the Global Ocean Oxygen Data and Atlas (GO2DAT) a project endorsed by UN decade. She is serving various advisory boards and expert teams like the Scientific and Technical Advisory Committee of the Copernicus Marine Service, the Expert Team on Earth Observing System Design and Evolution from WMO. She is chief editor of the Ocean state Report of the Marine Copernicus Service annual published in State of the Planet.



Dr Vânia Baptista

Vânia Baptista is a Junior Researcher at Centre of Marine Sciences of the University of Algarve (UALg). She is graduated in Marine Biology in 2010 at the UAlg. She has obtained an MSc in Marine Sciences, Marine Resources (specialization in Marine Biology and Ecology) at Abel Salazar Institute of Biomedical Sciences, University of Porto in 2012 and completed her PhD in Marine, Earth and Environmental Sciences (specialization in Marine Ecology) at the UAlg in 2019. Her work has been focused on fish larvae behaviour and ecology, and the effects of environmental and climate variability on the recruitment of fish species.

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