



WMO-IMO Symposium

Bios

Symposium Co-Chairs:

Symposium Co-Chair WMO: Ms Allison Allen

Ms Allison (Allie) Allen is the NWS Analyze, Forecast, and Support (AFS) Director. In this role, she oversees both the AFS Portfolio and the AFS Office, including the 11 national service programs (tropical, space, severe, public, winter, water, marine, tsunامي, fire, aviation, and climate) and the mission support programs. Allie previously served as the NWS Chief of the Marine, Tropical and Tsunami Services Branch from 2016 to 2021. Prior to coming to NWS, Allie spent 14 years as an oceanographer at the National Ocean Service's Center for Operational Oceanographic Products and Services from 2002 to 2016.

Allie is the Chair of Standing Committee on Marine Meteorological and Oceanographic Services (SC-MMO), a subsidiary body of Commission for Weather, Climate, Hydrological, Marine and Related Environmental Services and Applications (SERCOM) at WMO. Allie previously served as the Vice Chair of SC-MMO between 2022-2024 and as the Vice Chair of Expert Team on Maritime Safety (2020-2022).

Allie holds a Master's Certificate in Project Management from George Washington University School of Business and her Bachelor's Degree from Colgate University. She is married with two daughters and calls Maryland home.

Symposium Co-Chair IMO: Mr Joris Brouwers

Mr. Brouwers is the Coordinator for the Maritime Administration for the Kingdom of Netherlands, within the Ministry of Infrastructure and Water Management, where is also the Single Point of Contact for the IMO Member State Audit Scheme (IMSAS). Presently, he chairs the IMO Subcommittee on Navigation, Communications and Search & Rescue following Chairmanships of both the Navigation Working Group and Experts Group on Ships' Routeing under the IMO's Navigation Communication and Search and Rescue NCSR since 2019.

He has outstanding credentials as expert and leader in the field of safety of navigation, having built a career on completion of his Masters (MSc) in Navigation Technology from the University of Nottingham (UK). This, and having served in the Royal Netherlands Navy for 15 years as a

navigation and executive officer onboard, as well as a Vessel Traffic Operator and national examiner onshore, significantly contributes to his understanding of what is needed at the highest international policy level to create, sustain and improve the necessary framework to support the safety of navigation in particular and the safety of lives at sea in general. As a navigator and Meteorologist officer on board undertaking several taskings in the Caribbean region within the hurricane belt and providing support during the hurricane season, Mr. Brouwers has experienced that route planning and the (possible) impact of weather are intertwined both near shore and at open sea.

In his profession as a policy advisor, Mr Brouwers and his Dutch colleagues have experienced the impact of severe weather conditions in confined waters like the North Sea on the safety of navigation and the protection of the marine environment. Storms, waves and currents causing anchored vessels becoming adrift into Offshore Windfarms or container vessels losing containers near a Particularly Sensitive Sea Area have been, and will remain, the main drivers for emphasizing ongoing safety improvements and information. This is both on board and ashore, also taking into account the risks related to (severe) weather conditions.

Opening remarks:

IMO Secretary-General - Mr Arsenio Dominguez

Mr Dominguez assumed his role as tenth IMO Secretary-General on 1 January 2024, bringing with him more than three decades of experience serving the global maritime sector, across a spectrum of leadership roles of increasing scope and responsibility.

Initially representing his native Panama, first within the Panama Maritime Authority and in his lattermost appointment as Ambassador of Panama to IMO, his affinity for building consensus saw him elected as Chair of several flagship IMO intergovernmental meetings, including: the Marine Environment Protection Committee (MEPC), the Technical Committee of the 29th Assembly, and the Maritime Security, Piracy and Armed Robbery Group, as well as a number of Vice-Chair and Board member roles.

A naval architect at heart and by training, with a first degree from Veracruzana University, Mexico, he has also a Master of Business Administration (MBA) from the University of Hull and an executive qualification in International Law and European Politics at Birkbeck University.

In 2017 Mr. Dominguez joined the IMO, first as Chief of Staff, followed by Administrative Director, and then Director of the Marine Environment Division.

His initial term as IMO Secretary-General, approved at the 33rd Assembly in December 2023, is for a period of four years from 2024 to 2027.

WMO Deputy Secretary-General - Ms Ko Barrett

Ms Ko Barrett currently serves as the Deputy Secretary-General of the World Meteorological Organization (WMO), a role she assumed in April 2024. Before this, she was the Senior Advisor for Climate at the US National Oceanic and Atmospheric Administration (NOAA), where she provided strategic direction to align NOAA's climate services with national and global climate goals.

From 2015 to 2023, Ms. Barrett was one of the first women elected as Vice-Chair of the Intergovernmental Panel on Climate Change (IPCC). In this role, she played a crucial part in advancing global climate science, particularly through her leadership in the Special Report on

Oceans and Cryosphere and the Gender Action Team. Her expertise in climate science and policy has been instrumental in shaping international climate strategies.

Ms. Barrett's career spans over 15 years of representing the United States in climate negotiations, particularly within the United Nations Framework Convention on Climate Change. She has also held leadership roles within NOAA, including Deputy Assistant Administrator for Research Programs and Director of the Global Climate Change Program at the US Agency for International Development.

Ms. Barrett has received numerous accolades, including the NOAA Administrator's Awards, the U.S. Department of Commerce Gold Award, and a shared Nobel Peace Prize with the IPCC in 2007. She holds a Bachelor of Science degree in Environmental Studies from the University of North Carolina – Asheville and has been recognized for her contributions to environmental science and policy.

UN Secretary General's Special for the Ocean (via video) - Ambassador Peter Thomson

Ambassador Peter Thomson has served as the UN Secretary-General's Special Envoy for the Ocean since 2017, in which role he is driving the implementation of UN Sustainable Development Goal 14, to conserve and sustainably use the resources of the Ocean. He was elected to serve as President of the General Assembly of the United Nations for its 2016-17 term. He was Fiji's Permanent Representative to the United Nations from 2010 to 2016, during which time he was President of the Executive Board of the United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA) and the United Nations Office of Project Services (UNOPS). He led the Fiji team of diplomats that in 2013 chaired the Group of 77 and China – the UN's largest negotiating group, comprised of 133 developing countries. He was elected as President of the International Seabed Authority's Assembly in 2011 and as President of its Council in 2015. Ambassador Peter Thomson is a founding Co-Chair of the World Economic Forum's Friends of Ocean Action and is a supporting member of the High-Level Panel for Sustainable Ocean Economy. He has been conferred with Honorary Doctorates by the University of Bergen and the University of Edinburgh.

Keynote Address:

Captain Rhadika Menon – Recipient 2016 IMO Award for Exceptional Bravery at Sea

Capt. Radhika Menon is a pioneer in the maritime industry, celebrated as India's first female merchant navy captain and the first Indian woman to command a foreign-owned ship. Her illustrious career is marked by a series of groundbreaking achievements, including being the first woman to receive the International Maritime Organization (IMO) Award for Exceptional Bravery at Sea in 2016.

Starting her journey as a Radio officer, she transitioned to a navigating officer and steadily rose through the ranks, taking command in 2012. Today, she continues her career as an active sailing master, making an indelible mark on the maritime world.

In 2017, she co-founded the International Women Seafarers Foundation (IWSF) with the primary goal of promoting the participation of women seafarers in the maritime industry. Through IWSF, she provides ongoing mentorship and support, guiding women through the challenges of their careers. Additionally, Capt. Menon has been instrumental in developing and implementing best

practices for gender equality and inclusivity across the maritime industry, working with various companies to adopt supportive policies.

Capt. Menon has held several prestigious positions, including serving as Vice President of the Maritime Union of India for two terms and as Vice President of the Human Rights Protection Mission Women's Wing, Kerala.

Her contributions have earned her numerous accolades including the First Woman Achievers Award by the President of India & Nari Shakti Puraskar for her exceptional work in the field of women empowerment. Her leadership and advocacy continue to make the maritime sector a more inclusive and equitable space for all.

Updates since the 1st Symposium:

WMO - Dr Sarah GRIMES

Dr Sarah Grimes is the Chief of the Marine Services Division at the World Meteorological Organization (WMO). She has been based in Geneva for 9 years, and prior to that was working for UNESCO's Intergovernmental Oceanographic Commission (IOC), specifically supporting strengthening of the Global Ocean Observing System (GOOS). As secretariat, her role includes supporting meteorological services to strengthen their delivery of marine services. Sarah has a particular interest in connecting stakeholders to strengthen sustainable environmental development. She has a Doctorate in palynology and coastal science, with a focus in the Asia Pacific region from the University of Western Australia.

IMO – Mr Hiroyuki YAMADA

After graduating Tokyo University (Naval Architecture) in 1985, Hiro Yamada worked for Ministry of Transport in Japan, dealing with maritime safety and marine environment, including legislation of international instruments to national law and regulations. He also worked at the Japanese Embassy in London between 1997 and 2000 to attend IMO's meetings.

He joined the IMO Secretariat in 2005 and engaged in various technical and operational matters in the Maritime Safety Division (MSD), as the Secretary of some sub-committees under MSC (Maritime Safety Committee) and MEPC (Marine Environment Protection Committee).

In 2018, he was appointed as Director, Marine Environment Division (MED), where reduction of GHG emissions from international shipping and protection of the oceans were main subjects.

In 2022, he became Director, Conference Division (CD), when, after COVID, IMO re-started in-person meetings, supported by its newly-established hybrid meeting capabilities.

In 2024, he was appointed as Director, Maritime Safety Division (MSD). Currently the Red Sea crisis, together with the global security problems, are priority issues at IMO. As 2024's World Maritime Day theme at IMO is "Navigating the future: Safety First!", there are many safety-related issues, such as comprehensive consideration for safety of alternative fuels to reduce GHG emissions from international shipping, digitalization and autonomous shipping, etc.

Speakers and Moderators (in alpha order by surname)

Mr Mathieu BELBEOCH

Mr Mathieu Belbéoch is the manager of OceanOPS, the joint WMO/IOC-UNESCO Support Centre for oceanography and marine meteorology observing programmes.

He has 20 years of experience at the international level in the ocean observation systems implementation and governance. With a mathematical engineering background, applied to numerical modelling in oceanography, and after a short experience in leading web development projects, he has supported the development of the Argo programme as Technical Coordinator. He also been instrumental in the evolution of OceanOPS to becoming a firm operational centre to support keystone in-situ ocean observing systems. He has been the architect of an ambitious web-based information system to monitor the Global Ocean Observing System (GOOS) in real-time and deliver tools and services essential to its implementers and governing bodies. Also, he has pioneered the cooperation with mariners (sailing ships and NGOs e.g.) to help sustain the global arrays and raise the awareness of a larger public to metocean observations.

OceanOPS is now fully part of the WMO Infrastructure Department and WMO Integrated Global Observing System (WIGOS) Division, to monitor and report on the status of the GOOS, support efficient operations, and support free and unrestricted data and metadata delivery.

Dr Phillip BELCHER

Dr Phillip Belcher first went to sea in 1989 and served 10 years mostly on-board tankers with BP shipping. He gained a Master Mariner's Certificate of Competency and read for a number of degrees at Cardiff University. Consequently, he was awarded a PhD which focussed on the role of the human element in maritime safety. Following a 5-year stint as Assistant Director within the Bahamas Maritime Authority he joined INTERTANKO as their marine director.

Dr Belcher's duties now include the management of a varied team of master mariners, engineers, and several non-mariners to deliver on issues related to safety, security, vetting, cargoes (oil, chemicals and gas), and the human element.

He is a Fellow of the Royal Institute of Navigation, a Freeman of the City of London, a Liveryman of the Honourable Company of Master Mariners and in 2021 was awarded the Merchant Navy Medal for Meritorious Service for services to seafarer welfare during the pandemic.

Mr Hassan BOUKSIM

Since 2020, Hassan has been the assistant to the Director of Meteorological Forecasting and Research, for Morocco's General Directorate of Meteorology. Prior to this, he was Deputy Head of their National Forecasting Center, which he was awarded after more than 25 years as Head of Marine Meteorology Service. Further, he has been a Member of the EUMETSAT's African Satellite Meteorology Education and Training (ASMET) Group. He is well known and respected within the international meteorological and oceanographic community, especially in his role as Morocco's National Focal Point for WMO Marine Services, and through his contributions to the former WMO-UNESCO/IOC Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM), and

more recently, as vice-chair of the WMO Standing Committee for Marine Meteorology and Oceanography (SC-MMO). Through SC-MMO, he has been instrumental in directing, and contributing to, several activities that develop marine services in African countries. He was the Principal Facilitator for the 2023 WMO Marine Services Course, focused on strengthening marine service delivery for African French speaking countries.

Mr Peter BROADHURST

Mr Peter Broadhurst joined Inmarsat in 2014 as Vice President of Service Delivery for the Maritime business unit, where he was responsible for leading the development of products and services from conception and implementation, through to launch and life cycle management. Peter was instrumental in the launch of Inmarsat's high-speed broadband service Fleet Xpress launched in March 2016.

With over 25 years of experience in the maritime industry, Peter began his career at sea as a Radio Officer, before running his own business and working for a maritime distributor. Peter then spent 15 years with Sea Tel Inc., / Cobham SATCOM as Vice President of Sales and Marketing where he was responsible for overseeing and managing global sales, support, marketing, training, and product management.

Peter has a HND Electronics, Marine Radio General Certificate, Radar and Marine Navigation Aids accreditation from Wray Castle Merchant Navy School, and holds an Open University, BSc (Hons) First Class degree on Radio Frequency Systems.

Peter is Acting President of Comite International Radio Maritime (CIRM), on the Board of the World Maritime University and an Ambassador for the Sailors' Society

Ms Amy BUHL

Ms Amy Buhl has been working in Weathernews America Inc. (WNI) since 2004. She is the General Manager for Marine Group Operations (Europe and Americas) Weathernews Inc, where she is working to ensure the highest quality service and content for mitigating weather risks while also helping customers improve their environmental impact.

Her 20 years' experience at WNI started as a Voyage Planner within the Marine Division, then fulfilling multiple roles within the Oklahoma Operations Center. From 2017, she was named General Manager for Marine Group Operations, covering Voyage Planning and Offshore Energy operations in the US and EU, and is responsible to organize and lead WNI's global operational structure to provide weather risk communication and environmental target support for our customers, with the primary goal of ensuring the safety of mariners.

Born in Detroit, MI, she holds a BSc in Geophysical Sciences from the University of Chicago, and a MSc in Meteorology from the University of Oklahoma. She is a member Women's International Shipping and Trading Association (WISTA) and serves as a chapter co-president of WISTA USA's Great Lakes-Midwest Chapter.

Captain Derek CARDNO

Capt. Derek Cardno has been a commercial fisherman since 1987 and is currently, the Chief Mate on the fishing vessel Grateful, a 70m pelagic trawler.

Since 2009 Capt. Cardno has been the Marine Safety and Training Manager at the Scottish Fishermen's Federation (SFF), which he has been able to do alongside being an active fisherman.

SFF plays a key part in the UK fishing industry representing the interests of its members.

In 2018 Capt Cardno was awarded the Merchant Navy Medal for Meritorious Service (MNM) for his services to fishermen's safety and welfare by HRH Princess Royal. He was honoured to be the first fisherman ever to receive this public award. In July 2022, he was the first active fisherman to be granted an Associate Fellow of the Nautical Institute.

Over the last 25 years it has been Capt. Cardno's desire to see the industry that he has had the privilege to work in, be a safer industry for all his fellow fishermen. This desire also goes beyond UK fishermen through his work with the Fish Platform, which is a group of international fishing safety experts. The Fish Platform directors now play a huge part in the International Fund for Fishing Safety. This fund has been set up to support projects that will make a difference to fishermen's safety across the world.

Capt. Cardno is married to Jacinth, and together they have 3 children and 2 grandchildren. They live in Fraserburgh on the northeast corner of Scotland, which has a deep history of fishing and maritime.

Mr Erik DE GROOT

Mr Erik de Groot is the Associate Director of the National Program and Business Development Division within the Meteorological Service of Canada (Environment and Climate Change Canada). He also serves as the METAREA Coordinator for areas XVII and XVIII and is one of the vice-chairs of the WMO's Advisory Group for the Worldwide Met-Ocean Information and Warning Service (WWWIMS) Sub-Committee.

Erik started as an aviation weather forecaster before moving to public warnings, including issuing tornado and blizzard warnings for Western and Northern Canada as well as marine forecasts for the Arctic Ocean. He now heads the Group involved in innovating Environment and Climate Change Canada's public weather forecast and warning service. Erik is based in Montreal, Quebec.

Commander Alejandro DE LA MAZA DORIÓN

Commander de la Maza Dorión serves in the Chile Navy Weather Service. He is a retired meteorologist officer, former head of two Meteorological Centers and weather forecaster on five summer Antarctic campaigns, marine meteorology teacher, postgraduate on oceanography and internal contact point at technical committees for:

- World Meteorological Organization (WMO), acting as METAREA XV alternate coordinator for the Sub Committee on Worldwide Meteorological and Oceanographic Information Warning Services (AG- WWMIWS-SubC) and National Focal Point for Radio Frequencies Coordination (NFP-RFC), member of the Advisory Group on the Ocean, Expert Team of Sea Ice (ET-SI) at

Global Cryosphere Watch Advisory Group (GCW-AG) and South America Regional Association (RA-III), Expert Team on Marine Meteorology and Oceanography (ET-MMO).

- Intergovernmental Oceanographic Committee (IOC): member of South Pacific Regional Alliance (GRASP) for the Global Ocean Observing System (GOOS) and National Focal Point for Voluntary Observation Ships program (NFP-VOS).
- Directorate General of Maritime Territory and Merchant Marine (DGTMyMM), member of the Safety Information Committee (CCISM) and National Oceanography Committee (CONA), Working Groups on Remote Sensing and Geographical Information Systems (GT-PERSIG), Atmosphere and Ocean Interactions (GT-DOCA), El Niño & Climate Variability (GT-ENVAC) and Ocean Literacy (GT-COCEAN)
- International Ice Charting Working Group (IICWG) and Chile Naval Polytechnical Academy (APN), linked with marine training centers and user needs interactions with MSI Services under WMO competency frameworks and attending scientific congresses on physical oceanography, marine meteorology, Antarctic climate and ice research.

Dr Moira DOYLE

Dr Moira Doyle is a Professor at the Department of Atmospheric and Ocean Sciences at the University of Buenos Aires. She is also a researcher at the Centro de Investigación para la Dinámica del Mar (CIMA), with a focus on climate variability and change. The University Department where she is based, is one of the three components of the WMO Regional Training Center in Argentina.

Dr Moira Doyle has been focal point for the WMO RTC in Argentina, for the past 10 years. She has experience in developing online meteorology courses and has closely collaborated with WMO in creating and delivering the Spanish version of *Train the Trainers* online and face to face modules. At present she is collaborating with the upcoming WMO Marine Service Course for the Spanish speaking South American/Caribbean countries. Dr Doyle is also vice chair for the WMO's Services Commission, Expert Team on Competency and Capacity Development within the Standing Committee for Marine Meteorology and Oceanographic Services (SC-MMO), where she leads international activities in developing capacity in marine services.

Mr Geoffrey DUNSWORTH

Since February 2022, Mr Geoffrey Dunsworth has been Manager of the National Marine Weather Service Program (MWSP) in the National Programs and Business Development (NPBD) Division within the Meteorological Service of Canada (MSC) of Environment and Climate Change Canada (ECCC). Geoff joined MSC in 2007, working as an aviation forecaster at the Canadian Meteorological Aviation Centre in Montreal, Quebec. In 2013, Geoff moved to the Joint Meteorological Centre in Fredericton, New Brunswick where he led a team of ECCC meteorologists in providing weather support services to the Canadian Armed Forces. Geoff took on the role of acting Manager, Public and Marine Weather Service Programs within the NPBD division of MSC in 2020. In his current role, Geoff serves as Canada's lead for the implementation of the S-41X series of weather, wave and ice overlays. Geoff was first introduced to the WMO when he joined an Expert Team on Maritime Safety's (ET-MS) meeting in 2022 as a guest for a discussion on S-41X data overlays. In 2023, Geoff became co-chair of the WMO Regional Association (RA) IV's new Expert Team on Disaster Risk Reduction (ET-DRR) and has since switched to be a member of the RA IV's Expert Team on Marine Meteorological and Oceanographic Services (ET-MMO). In 2023, Geoff travelled to Bali, Indonesia as a member of the

Canadian delegation for the SERCOM-3 session. Following SERCOM-3, Geoff joined the WMO Standing Committee on Marine Meteorological and Oceanographic Services (SC-MMO) as a core member in 2024.

Dr Karolin EICHLER

Dr Karolin Eichler is currently the WMO manager in the International Affairs Division of Deutscher Wetterdienst, Germany (DWD) - the German Weather Service - as well as the WMO RA VI Representative in the Services Commission (SERCOM) Management Group. Her background in meteorology enabled her to gather different experiences ranging from numerical modeling to satellite meteorology and climate. Besides her work experience gathered Germany, she also worked at the WMO in Geneva, Switzerland and as the advisor of the former WMO President. Her passion for the cryosphere brings her regularly to the polar regions where she works as an expedition guide and lecturer on smaller vessels operating in the Arctic and Antarctica and tries to engage in as many citizen science projects as possible.

Mr Darin FIGURSKEY

Darin Figurskey has been with NOAA's National Weather Service (NWS) since January 16, 1990. A graduate of the University of Michigan, Darin has worked at NWS offices in Flint, Michigan, Detroit, Michigan, Lubbock, Texas, White Lake, Michigan, Buffalo, New York, and Raleigh, North Carolina, prior to him becoming the Operations Branch Chief at the Ocean Prediction Center in December, 2015. Darin is responsible for the operational forecast and warning services for the Ocean Prediction Center's area of responsibility that covers the high seas of the north Atlantic and north Pacific. The Ocean Prediction Center's Ocean Forecast Branch also produces forecast information for part of the Arctic Ocean. Darin was Chair of the WMO-IOC Ship Observations Team from October, 2017 until May, 2023.

Dr Nelly FLORIDA RIAMA

Nelly currently serves as the Deputy Head of Geophysics at the Indonesia Agency for Meteorology, Climatology, and Geophysics (BMKG). In addition to her current role, Nelly is Chair of the WMO-IOC Data Buoy Cooperation Panel (DBCP), GOOS National Focal Point, and Core Member of the WMO's Standing Committee on Marine Meteorology and Oceanographic Services (SC-MMO).

Her extensive experience includes former positions such as Director of the Center for Education and Training at BMKG, and Director of the Indonesia Regional Training Center of WMO for Meteorology. She also held the position of Director of the Indonesia's Specialized Training Center for Ocean Teachers Global Academy of UNESCO-IOC, with a focus on marine meteorology and tsunami; Director of the Center for Research and Development; and Director of the Center for Marine Meteorology at BMKG. Nelly's contributions to marine meteorological and oceanographic activities are widely recognized, particularly through her involvement with the former Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM), along with her ongoing leadership in international activities on geophysics, oceanography, and meteorology.

Mr Erwann GABRIEL

Mr Erwann Gabriel is a resident of Saint-Malo (France), a town famous for the highest tides in Europe with spectacular waves battering the shoreline. A former sailing teacher, keen kite surfer and sailor, Erwann has held the role of Fleet and Ports Director for Brittany Ferries since 2018.

After completing his baccalauréat in Rennes, Erwann studied at the Ecole Nationale de la Marine Marchande, in Nantes while sailing as a cadet on the Delmas cargo ships. After completing his Diplôme d'Etude Supérieure de la Marine Marchande he joined company Tankafrica first as deck officer and engineer.

He started his Brittany Ferries career in February 2002, rising through the officer ranks to relief captain in 2013. During his time at sea with the Brittany-based company, Erwann sailed on cruise-ferries connecting France and the UK, as well as on long routes sailing through the Bay of Biscay to northern Spain.

Erwann has overseen some of the most transformative phases in Brittany Ferries' story, since becoming Fleet Director in 2018. This includes the most comprehensive fleet renewal programme in the company's history, with the introduction of two new LNG-powered ships and hybrid vessels arriving next year. He has also been at the sharp-end of challenges posed by new emission trading rules, as well as technology like real-time routing software assisting captains navigate optimum routes based on current and weather conditions.

A French national, Erwann spends much of his time in ports and in contact with captains, where he has an active role in scheduling and call performance.

Mr Peter GEDE

Mr Peter Gede is a risk professional at A.P. Moller Maersk. He is responsible for the Risk Engineering program and the Loss Prevention function in Maersk Insurance A/S. Peter reports to the Head of Risk Management Lars Henneberg.

Peter provides oversight, guidance and mitigations recommendations for Maersk Insurance and A.P. Moller Maersk's Risk Engineering and Climate Change risk, for their Terminals, Warehouses, and offices. Peter is also responsible for the company's Climate Change adaptation for both reporting purposes and operational resilience.

He joined A.P Moller Maersk's risk function in 2020 and over the course of his employment he also supervised larger claims.

Peter has a technical background with 16 years of experience in the insurance industry and is a certified property claims assessor.

Mr Jonathan GREEN

Mr Jonathan Green is the founder and director of the Galapagos Whale Shark Project, and has worked for nearly three decades in the Galapagos Islands. He is an elected fellow of the Royal Geographical Society in London, and when not in Galapagos he works on expedition vessels in the polar regions.

Jonathan is a native of England, graduating BSc Geology with Geography from the University of North London in 1984. He was elected Fellow of the Royal Geographical Society of London 1989. Since this time he has worked in the Galapagos Islands, the Amazon, Antarctica, the Arctic, Africa, Central and South America and Indonesia as a diver, photographer on land and underwater, leading and participating in expeditions and expedition travel. In 2009 he led a dive expedition to explore the undersea world of Antarctica in a 70 ft sail boat. When not working on expedition ships, he works as a research scientist as the founder and director of the Galapagos Whale Shark Project, studying population dynamics, genetics and long-term movements of whale sharks on a regional and global scale. He has three children and currently resides in Ecuador.

Mr Kenneth KERR

Mr Kenneth Kerr is the Science and Technology Officer of the Caribbean Meteorological Organization (CMO) and Chair of the WMO Regional Association (RA) RA IV Services Committee. Prior to this, he spent 11 years as an operational meteorologist at the Trinidad and Tobago Meteorologist, followed by 10 years as Climatologist and then Chief Climatologist. During this time, he developed a varied technical and leadership background in the application of meteorology, climatology, and climate science. For most of his career, he has delivered weather and climate information, products, and services on behalf of the Government of Trinidad and Tobago to assist in the decision-making process to manage related risks. He is an expert in the operational delivery of weather forecasts, and warnings and climate services at the national and regional levels. From a policy perspective, Kenneth was Trinidad and Tobago Principal Delegate to IPCC for 10 years, ending in 2022.

As Science and Technology Officer at the CMO HQ, Kenneth has accountability for promotion and development of the technical and scientific aspects of the CMO and for providing technical and scientific support to the activities of the National Meteorological and Hydrological Services of CMO Member countries, as well as liaising with regional and international technical and scientific bodies in areas of interest to the CMO. Kenneth has a first degree in Meteorology and Computer Science from the University of the West Indies, and a postgraduate degree in Applied Meteorology and Climate with Management from the University of Reading, United Kingdom.

Captain Andrew KINSEY

Captain Andrew Kinsey is the Director of the Marine Risk Consulting unit at Integrated Specialty Coverages (ISC), a leading, multi-line insurance program administrator.

Captain Kinsey is a seasoned maritime professional with a career spanning more than 25 years at sea and a globally recognized expert with a wealth of knowledge and experience across many facets of the maritime landscape. He is a United States Coast Guard Licensed Master with unlimited tonnage and oceans endorsement. He is a Global Certified Marine Surveyor by the National Association of Marine Surveyors, a Society of Accredited Marine Surveyors Accredited Marine Surveyor, and serves as the U.S. Representative on the IUMI (International Union of Marine Insurance) Loss Prevention Committee.

He is widely recognized as a subject matter expert, frequently speaking at industry conferences and teaching surveying techniques to professional organizations. Kinsey's engagements span prestigious forums such as the Tulane Admiralty Law Institute and King's College in London. He is regularly

sought by the media to provide his insights relative to issues and events impacting the maritime industry being interviewed by CNN, Bloomberg, CNBC, NPR, and other news outlets.

Mr Ian LISK

President, Services Commission, WMO

Ian Lisk is the first president of the World Meteorological Organisation (WMO) Commission for Weather, Climate, Hydrological, Marine and Related Environmental Services and Applications (SERCOM). Since SERCOM was established in July 2019, Ian has led the development of new structures and partnerships to better coordinate and oversee the delivery of 'useful, usable and used' services to better protect and save lives and livelihoods around the world. Ian has worked for the UK Met Office in a variety of forecasting, training and senior management roles for over 35-years and has been involved in the work of WMO since 2003, primarily through the former Commission for Aeronautical Meteorology (CAeM) where he served as vice-president from 2010-18 and as the last CAeM president from 2018-19. Ian is based in Exeter in the south-west of England and is married with three children.

Dr Bev MACKENZIE

CMarSci, FIMarEST, FMBA

Dr Mackenzie is Head of Intergovernmental Engagement at BIMCO, the world's largest direct-entry membership organisation for the shipping industry. She is the London-based Representative at the International Maritime Organization and also provides the link between BIMCO and IMO and other intergovernmental organisations across the globe to ensure that BIMCO's technical expertise can be best utilised by decisions makers- to support practical and harmonised regulation for the shipping industry.

She has a degree in chemical oceanography and a PhD in physical oceanography from the University of Liverpool, UK and applies that scientific knowledge to help understand the science-engineering-policy interface. She has expertise in operational oceanography and ocean observing and issues relating to maritime industries and the environment including issues such as sea-based sources of marine plastics, biofouling management, climate change and air pollution and marine pollution.

She is on the Board for the UK's Net Zero Oceanographic Capability programme and is a Trustee of Plymouth Marine Laboratory.

Dr Anita MÄKINEN

Dr Anita Mäkinen is the Chief Advisor to the Finnish Transport and Communications Agency, where she addresses all shipping related environmental issues and represents the agency in the international and regional organizations where such issues are discussed, to include the IMO, EU, Baltic Marine Environment Protection Commission (HELCOM) and the Arctic Council. She is the Alternate Permanent Representative of Finland to the IMO, and she chairs the IMO's Sub-Committee on Pollution Prevention and Response.

In her position she has been member of the Finnish delegation to the United Nations Framework Convention on Climate Change (UNFCCC) e.g. in Paris in 2015 and the Ocean Conference in New York and Lisbon in 2017 and 2022, respectively.

Before her present position, Dr Mäkinen worked as the Head of Marine Environment Protection Unit of the Finnish Transport Safety Agency and in different positions at the University of Turku. At the University she supervised Finnish and foreign students' Master and PhD studies.

Dr Anita Mäkinen graduated from the University of Turku. She wrote her doctoral thesis on marine biology at the Åbo Akademi University and holds an Adjunct Professor degree (Docent) at the University of Helsinki in the same discipline.

Dr Marcel NICOLAUS

Marcel Nicolaus is a research scientist with the Alfred-Wegener-Institut für Polar- und Meeresforschung (AWI) in Bremerhaven, Germany. He received his PhD from the University of Bremen (Germany), based on results in sea ice physics from his work at AWI. Afterwards he worked as a PostDoc at the Norwegian Polar Institute (Tromsø, Norway) and at the University of Alberta (Edmonton, Canada). Since 2010, he has been working on the mass and energy balance of sea ice and its snow cover in the Arctic and Antarctic at AWI. This work is mostly based on observations from field campaigns, including measurements with autonomous platforms (buoys) and under-ice remotely operated vehicles (ROV). He has participated in more than 30 research campaigns with icebreakers or at research stations in the Arctic and Antarctic. He has led numerous national and international projects on the energy and mass balance of sea ice and on the properties of snow on sea ice. Much of his results are based on measurements with autonomous systems and with remotely operated vehicles (ROV) under the sea ice. He took a leading position in the Arctic climate study 'MOSAiC' in 2019/20. During the one-year drift of the research icebreaker Polarstern, he himself spent five months in the Arctic to study sea ice and its interactions with the ocean and atmosphere. As one of the leading experts behind seaiceportal.de, a portal gathering important and up-to-date sea ice information, he provides facts and knowledge to experts and the general public.

Professor Dwikorita KARNAWATI

Prof. Dwikorita Karnawati is the Director of the Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG). Previously, she was the first female President of Universitas Gadjah Mada and Professor in Environmental Geology and Disaster Mitigation. She is an internationally recognized expert on disaster risk reduction and early warning, with a PhD in Earth Sciences and post-doctoral research on hydro-meteorological disaster prediction. She has served as Vice-President of the International Consortium on Landslides since 2015 and chairs the Inter-governmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System. Prof. Karnawati has actively promoted integration of social concerns in technical systems for disaster risk reduction, leading to the adoption of an international standard for community-based landslide early warning (ISO 22327). She also led efforts for the establishment of the Multi-Hazard Early Warning System in Indonesia. In her current role, she drives innovation on early warning technology and impact-based forecasting systems, powered by big data, artificial intelligence and the Internet of Things.

Mr Michael MARTENS

Mr Michael Martens has finished university in Hamburg with a MSc in Meteorology, before starting with DWD in operational forecasting in early 2012. In 2013, Mr Martens joined MetService New Zealand as a forecaster. He became the president of the MetSociety of New Zealand in 2019 and 2020 and the MetAREA Coordinator for Region XIV in 2021, when he also became the manager of Regional and Marine Weather Services at MetService NZ. Mr Martens moved back to Germany later in 2022 and took over management of the Regional and Severe Weather Forecast Office of DWD in Hamburg and also became Head of Marine and Polar Weather Services at DWD.

Dr Sewoong OH

Dr. Sewoong Oh is a principal research engineer for the Maritime Digital Transformation Research Center of Ocean and Maritime Digital Technology Research Division, at the Korea Research Institute of Ships and Ocean engineering (KRISO). He has worked at KRISO since 2001, where his research activities focus on the S-100 universal hydrographic data framework and maritime services for e-Navigation implementation. He has been leading the S-100 test bed projects funded by KHOA (Korea Hydrographic and Oceanographic Agency) and led two research topics (electronic nautical chart service for non-SOLAS vessels, and marine information overlay service including marine weather warnings, conditions and observations) in the e-Nav project. He is also the lead researcher of the Smart Aids to Navigation (AtoN) Project, to establish an AtoN information center and develop AtoN information services based on Maritime Resource Name, S-200 series product specifications, and the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) technical guidelines. He is currently a member of the International Hydrographic Organization (IHO) S-100 working group and IALA Aton Requirement Management (ARM) committee, and he participates in the IHO S-100 tools workshop and the S-200 training program of the IALA World-Wide Academy (WWA) as a lecturer. He has a keen interest in the development of marine weather overlay standard and would like to contribute to the implementation of S-412 marine weather warnings services in relation to the S-100 roadmap approved by IMO. Dr. Oh majored in harbor logistics and industrial engineering at Korea Maritime University.

Mr Ramon OOSTERKAMP

Having worked as an operational meteorologist for 14 years, followed by management of the Severe Weather and Public weather units and wider forecasting operations, he now leads Aotearoa's Forecasting operations for MetService/MetraWeather.

Mr John PARKER

John is an expert and former chair of the WMO Standing Committee on Marine Meteorological and Oceanographic Services (SC-MMO), appointed in recognition of his knowledge and experience in international marine services. John has been an expert within the WMO structure since 2007. In 2022, John retired from a career of more than 35 years with the Meteorological Service of Canada. His most recent position was Director of Prediction Service Operations for Atlantic and Ice, which included responsibilities for operational meteorology, services programs and applied science activities for Atlantic Canada, including the Canadian Hurricane Centre and the Canadian Ice Service.

His experience, domestic and international, has spanned several programs including severe weather, tropical cyclones, tsunami, and marine weather and ice services.

He is a former member of the North American Ice Services and the International Ice Charting Working Group (IICWG) and continues his association as secretariat for the IICWG.

Captain David J. PATRAIKO

David Patraiko is the Director of Projects and Head of Research and Relationships for The Nautical Institute (NI). He oversees much of the Institute's work on technical and training issues, and how these convert into Professional Development for individuals and the development of best practices in the industry. He is a regular contributor to the NI's publications and represents the NI with international organisations such as the IMO and IALA. He is currently the Chair of the Green Award Board of Experts.

After a brief period as an independent consultant and surveyor, in 1997 he accepted the position as Project Manager for The Nautical Institute and became Director of Projects in 2003. A graduate of the Massachusetts Maritime Academy (US), he sailed on a variety of international vessels in his sixteen years in the Merchant Navy (1981 – 1997). He holds an Unlimited Master Mariners licence, and was awarded an MBA degree from Henley Management College (UK).

The Nautical Institute is the recognised international professional body for qualified mariners and others with an interest in nautical science. Its purpose is to promote high standards of knowledge, qualifications and competence amongst those in control of sea-going craft, both afloat and ashore. The Institute holds Non-Governmental Organisation status at the International Maritime Organization.

Captain Daniel PEIXOTO DE CARVALHO

Captain Daniel Carvalho is the Director of the Centro de Hidrografia da Marinha (Brazilian Navy Hydrography Center). Daniel has had a distinguished 30-year naval career, with a focus on marine meteorology, physical oceanography and maritime safety. He has had extensive field experience at sea and has been a weather forecaster in the tropics, subtropics, and Antarctica. He was the METAREA V Coordinator from 2017-2020, and he is the current Chair of the WMO's Expert Team on Maritime Safety. Daniel sailed more than 900 days at sea throughout his career, collecting metocean data aboard 10 ships. He was the commanding officer (captain) for three, including the most advanced research vessel of the Brazilian Government, the R/V "Vital de Oliveira". Daniel is a graduate of the US Naval Postgraduate School (MSc, Meteorology and Physical Oceanography) and the Escola Naval (Brazilian Naval Academy - BSc in Naval Sciences, Electronics); he also holds certification as an International Hydrographic Office Category "A" Hydrographer.

Dr Joanna POST

Dr. Joanna Post is Head of the Ocean Observations and Services Section at the Intergovernmental Oceanographic Commission (IOC) of UNESCO and, as director of the Global Ocean Observing System (GOOS), is working to sustain and strengthen GOOS to deliver operational services including for risk

management, forecasting, health and sustainable ocean economies. Before joining IOC in 2023, she was with the United Nations Framework Convention on Climate Change (UNFCCC) secretariat for over a decade supporting intergovernmental negotiations and leading international engagement on climate change, science and ocean policy. She began her career as a science writer and communications manager and holds a Ph.D. in environmental science from the University of Newcastle Upon Tyne, UK.

Mr Keld QVISTGAARD

Keld Qvistgaard is senior ice advisor, with the Greenland Ice Service, an operational branch of the Danish Meteorological Institute (DMI). He is currently responsible planning and coordination of radar satellite data used in DMI operations as well planning of ice products serving the marine community navigating the Greenland Waters and provisions to the European Copernicus Marine Service Program. This is coordinated in close collaboration with the European Space Agency and commercial satellite data providers. He works closely with national ice services around the world in the International Ice Charting Working Group and is currently leading a task team dealing with Maritime Training Center Engagement.

With many years directly involved in operations, Keld is a specialist in the analysis of synthetic aperture data for polar waters, sea ice and icebergs, in support of safe navigation via public and tailored services. He has frequently been deployed to the DMI Ice Patrol in Greenland, has served on ships operating in ice near Greenland, and from 2005-2008 was deployed to Kazakhstan as onsite ice advisor of an ice monitoring program for the North Caspian Sea. His expertise is now often used in special projects, training programs for staff and mariners, and new strategies for long term satellite-based solutions in polar waters serving safe navigation.

Keld has a broad international network, delivering numerous Arctic shipping conference presentations and, from 2006 to 2019, was a member of the joint WMO-IOC Expert Team on Sea Ice. He has been a member of the WMO's Standing Committee on Marine Meteorological and Oceanographic Services since 2020.

Captain Alvaro SCARDILLI

Lieutenant commander from the Argentine navy. Head of Argentine Ice Service and Navy Weather Service, both services implemented at the Naval Hydrographic Service. Captain Scardilli has a degree in atmospheric sciences at the Buenos Aires university. His work is mostly focused on the development of products related with ice and weather, for Mariners in the South Atlantic Ocean and antarctica. He is also the representative for region 3 (South America and caribe) at the global ocean observing system and the joint WMO-IOC collaborative board. Captain Scardilli has operational experience after several Antarctic cruises on board navy ships during summer logistics operations. He also directs and co-directs different research projects about ice and marine weather climatology and satellite imagery interpretation for sea ice and icebergs.

Mr Craig SETZER

Craig Setzer is Chief Meteorologist for Royal Caribbean Group, the company tasked with overseeing Royal Caribbean International, Celebrity, SilverSea, Tui, and Hapag-Lloyd cruise line brands. He is responsible for monitoring nearly 60 cruise ships worldwide for voyage or port weather impacts. Craig has a degree in meteorology and is an American Meteorological Society Certified Consulting Meteorologist. Before joining Royal Caribbean Group, Craig worked in television, for the National Hurricane Center, and law firms as a forensic marine meteorologist. When he's not busy speaking with captains discussing weather challenges, he enjoys sailing the waters of South Florida and The Bahamas.

Mr Joseph SIENKIEWICZ

Joseph (Joe) Sienkiewicz serves as the Chief of the Ocean Applications Branch of the U.S. National Oceanic and Atmospheric Administration's (NOAA) Ocean Prediction Center (OPC). The OPC has warning and forecast responsibilities for Metareas IV, the western North Atlantic and XII, the eastern and central North Pacific. Joe has worked in operational marine meteorology with NOAA for over 35 years. His professional interests include the use of satellite-derived data to improve marine weather warnings and forecasts, explosively developing storms, and the application of weather information in marine operations. He has served on a EUMETSAT-sponsored training team with NOAA and European scientists to teach marine meteorologists from across the globe on the application of satellite sensed ocean winds and waves. More recently, he is leading the developmental effort for the S-100 weather portrayals for warnings, graphics, grids and observations, working with both the International Hydrographic Organization and WMO. Joe is a graduate of the State University of New York Maritime College (B.S.) and University of Washington (M.S.). He held a USCG Unlimited Third Mate License and limited tonnage Master's License and worked 5 years as mate and relief captain on tugboats based in New York Harbor.

Dr Alice SOARES

Alice Soares is a Senior Hydromet Advisor to the World Meteorological Organization (WMO) and World Bank (WB).

Alice started her career in meteorology and oceanography in 1995 at the Portuguese Meteorological Service, dealing with weather and marine data-processing, forecasting and services. She acted as Focal Point and expert in the WMO's Commission for Marine Meteorology (CMM) and the Joint WMO-IOC Commission for Oceanography and Marine Meteorology (JCOMM); and as a Portuguese delegate at the Intergovernmental Oceanographic Commission (IOC) of UNESCO. At the same time, Alice was awarded a visiting Professorship at the Lusophone University in Lisbon, to develop the academic programs in marine meteorology and related fields. Alice supervised numerous graduate students and taught courses in air-sea interaction, atmospheric thermodynamics, dynamic and synoptic meteorology, and atmospheric and oceanographic boundary layers.

In 2006, Alice was appointed Scientific Officer at the Ocean Affairs Division of the World Meteorological Organization; and in 2010, she was awarded the permanent position as Scientific Officer at the Data-processing and Forecasting System Division of WMO. Since 2018, Alice serves as Senior Hydromet Advisor and provides expert advice to WMO, WB, and other development partners and government agencies. Alice has co-authored numerous research papers, books, and regulatory

and technical publications on meteorology (weather and climate), marine meteorology and oceanography.

Ms Emma STEVENTON

With First Class Honours from the University of Southampton in Marine Biology & Oceanography, Emma Steventon has over ten years' experience working within the Technical Services directorate of the UK Met Office, across various roles including Marine Data Specialist, Port Meteorological Officer for Scotland, Upper Air & Remote Sensing Networks Manager and the current post of Surface Marine Networks Manager. Emma is currently responsible for managing the UK surface marine observing networks, in particular the 200 strong fleet of UK Voluntary Observing Ships (VOS), the drifting buoy network, and a team of regionally based Port Meteorological Officers located around the UK. Emma coordinates the supply of high-quality marine data into Met Office numerical weather prediction models, with current efforts focusing on automation of data supply and engaging with third parties to diversify and exploit alternative data sources.

As a key member of the marine international community, Ms Steventon Chairs EUMETNET's Surface Marine VOS Panel, and is a member of multiple Global Ocean Observing System Ship Observations Team (SOT), Data Buoy Cooperation Team, and Observations Coordination Group task teams.

A particular highlight of her career was chairing the Task Team for SOT Metadata, to successfully design and coordinate the transition from the WMO Pub. 47 Metadata standard to the WMO Integrated Global Observing System-compatible 'SOT' Metadata standard, now fully operational across the SOT community.

Mr Haakon STORHAUG

Mr Haakon Storhaug is the Senior Adviser and Coordinator of International Affairs at the Norwegian Maritime Authority, where he started working in 1990. During his career he has served as a coordinator for technical cooperation activities in Mozambique and Namibia, Associate Expert for the Maritime Industries Branch for the International Labour Office in Geneva and has headed several key delegations to IMO and ILO. Haakon presently chairs the IMO's Sub-Committee on Human Element, Training and Watchkeeping (HTW). He is also a Lead Auditor for the IMO Member State Audit Scheme and Head of Delegation to the International Labour Organization's (ILO) Special Tripartite Committee.

Haakon has a Master's Degree in International Relations from the University of Cambridge, Master of General Business, majoring in international shipping management, Norwegian School of Management.

Mr Hiroyuki YAMADA

Yamada Hiroyuki (Hiro) is the Director, Maritime Safety Division, for the IMO.

After graduating from Tokyo University with a degree in Naval Architecture in 1985, Hiro worked for the Ministry of Transport in Japan, dealing with maritime safety and marine environmental issues, including legislation of international instruments to national law and regulations. He also worked at the Japanese Embassy in London between 1997 and 2000, to attend IMO's meetings.

He joined the IMO Secretariat in 2005 and engaged in various technical and operational matters in the Maritime Safety Division, as the Secretary of some sub-committees under the Maritime Safety Committee and the Marine Environment Protection Committee.

In 2018, he was appointed as Director, Marine Environment Division, where reduction of greenhouse gas (GHG) emissions from international shipping and protection of the oceans were main subjects. In 2022, he became Director, Conference Division, when, after COVID, IMO re-started in-person meetings, supported by its newly established hybrid meeting capabilities.

In 2024, he was appointed as Director, Maritime Safety Division. Currently the Red Sea crisis, together with the global security problems, are priority issues at IMO. As 2024's World Maritime Day theme at IMO is "Navigating the future: Safety First!", there are many safety-related issues, such as comprehensive consideration for the safety of alternative fuels to reduce GHG emissions from international shipping, digitalization and autonomous operations.

Ms Justyna WODZICZKO

Justyna Wodziczko is the Head of the Forecasting Division at the Norwegian Meteorological Institute in Tromsø. With over a decade of experience as a weather forecaster, Justyna has honed her skills across various sectors, including aviation, public forecasting, social media, and maritime services. Since stepping into her leadership role in 2018, she has guided her team through the rapidly evolving landscape of meteorology, embracing new technologies and methodologies to enhance forecasting accuracy and service delivery.

Justyna has led several projects and is passionate about communicating with users to understand better how they perceive and interact with meteorological products. She works extensively with Arctic regions, focusing on the climate changes in these sensitive environments. As part of her responsibilities, she manages three key meteorological stations in the Barents Sea: Bear Island, Hopen, and Jan Mayen.

Beyond her professional commitments, Justyna is an avid snowboarder with a love for travel, cars, and interior design. Her diverse interests and commitment to excellence make her a dynamic leader, dedicated to advancing meteorological services and engaging with the public on the importance of weather and climate understanding.