

# 2<sup>nd</sup> WMO-IMO Symposium on Extreme Maritime Weather

*Bridging the Knowledge Gap Towards Safer Shipping*

● 23-26 September 2024 ● IMO Headquarters, London

## Programme



NAVIGATING  
THE FUTURE.  
SAFETY FIRST!



INTERNATIONAL  
MARITIME  
ORGANIZATION



WORLD  
METEOROLOGICAL  
ORGANIZATION



2021  
2030 United Nations Decade  
of Ocean Science  
for Sustainable Development

Committee Room 9 on 2<sup>nd</sup> floor, also live streamed on IMO's [YouTube channel](https://www.youtube.com/@IMOHQ/streams) (<https://www.youtube.com/@IMOHQ/streams>)

## Monday, 23 September 2024

Time	Session	Objectives / topics
9:30 – 10:30	<p><b>Session 1: Opening Session and Welcome Remarks</b></p> <p><i>Symposium Co-Chairs: Ms Allison Allen (NOAA, US); and Mr Joris Brouwers (IMO NCSR Sub-Committee)</i></p>	<ul style="list-style-type: none"> <li>• Welcome / Practical Information</li> <li>• Opening Remarks: <ul style="list-style-type: none"> <li>• IMO Secretary-General - Mr Arsenio Dominguez;</li> <li>• WMO Deputy Secretary-General - Ms Ko Barrett;</li> <li>• UN Special Ocean Envoy (via video) - Ambassador Peter Thomson</li> </ul> </li> <li>• Keynote Address - Captain Radhika Menon – Recipient 2016 IMO Award for Exceptional Bravery at Sea</li> <li>• Updates since the 1<sup>st</sup> Symposium (WMO - Dr Sarah Grimes, IMO – Mr Hiroyuki Yamada)</li> </ul>
10:30 – 11:00	Coffee Break	<b>Delegate Lounge 1<sup>st</sup> floor - Co-Sponsored by <i>Environment and Climate Change Canada, and Met Service, New Zealand</i></b>
11:00 – 12:30	<p><b>Session 2: Extreme Weather and Safety at Sea</b></p> <p><i>Moderator: Ms Justyna Wodziczko (Met Norway)</i></p>	<p><b>Objective:</b> Discuss recent cases of extreme and hazardous weather events and the impacts of climate change on maritime activities, highlighting the need for enhancing collaboration among the metocean, maritime, insurance, and other relevant communities and stakeholders for safety at sea.</p> <ul style="list-style-type: none"> <li>• Overview of recent extreme and hazardous maritime weather events and the concept of meteorological maritime safety information (Mr Joseph Sienkiewicz – US NOAA)</li> <li>• Recent indications in weather related maritime incidents: Are better forecasts reducing loss of life and property at sea? (Mr Peter Broadhurst – CIRM)</li> <li>• Perspectives from the insurance industry (Captain Andrew Kinsey – Integrated Specialty Coverages, LLC)</li> <li>• Impacts of extreme weather and climate change on port infrastructure (Mr Peter Gede – Maersk)</li> </ul>
12:30 – 14:00	Lunch	
14:00 – 15:00	<p><b>Session 3: Enhancing Knowledge Opportunities for Seafarers and Forecasters</b></p> <p><i>Moderator: Dr Moira Doyle (CIMA)</i></p>	<p><b>Objective:</b> Highlight the state of training in marine weather for both seafarers and metocean forecasters and consider possible enhancements to training programmes.</p> <ul style="list-style-type: none"> <li>• Perspectives from the: <ul style="list-style-type: none"> <li>○ Maritime community (Mr Hakkan Storhaug – IMO Sub-Committee on Human Element, Training &amp; Watchkeeping)</li> <li>○ Maritime training community (Captain David Patraiko – The Nautical Institute)</li> <li>○ Meteorological community (Mr John Parker – WMO SC-MMO)</li> </ul> </li> </ul>
15:00 – 15:30	Tea Break	<b>Delegate Lounge 1<sup>st</sup> floor - Sponsored by <i>Meteorologisk institutt (Norway)</i></b>
15:30 – 17:00	<p><b>Interactive Scenario</b></p> <p><i>Moderator: Dr Moira Doyle (CIMA)</i></p>	<b>Objective:</b> Participants will be invited to join groups of represented stakeholders, for an opportunity to work through various extreme maritime weather scenarios and consider their responses should they every be in such a scenario.
17:00 – 17:30	<b>Day 1 Summary</b>	
18:00 – 20:00	<b>WMO-IMO Evening Reception</b>	(All invited - Cafeteria on 4 <sup>th</sup> floor)

## Tuesday, 24 September 2024

Time	Session	Objectives / topics
9:30 – 11:00	<p><b>Session 4: Observations and Data Collection</b></p> <p><i>Moderator: Dr Joanna Post (IOC/UNESCO)</i></p>	<p><b>Objective:</b> Provide an overview of current weather and ocean observations at sea, highlighting the complementary nature of ship observations with other ocean observing systems and their impact on the quality of maritime weather early warnings and forecasts.</p> <ul style="list-style-type: none"> <li>• Introduction: The Importance of the Global Ocean Observing System (GOOS) (Dr Joanna Post - IOC/UNESCO)</li> <li>• View of a Forecaster: Why ship observations make such a difference (Mr Darin Figsurskey – US NOAA)</li> <li>• The Voluntary Observing Ship (VOS) Scheme: Present status, recent achievements, and ongoing challenges for National Meteorological Agencies (Ms. Emma Steventon – UK Met Office)</li> <li>• Status of the 3rd Party Data (Mr Dirk Windmuller – DWD, Germany)</li> <li>• Industry perspective: Experience, motivation and challenges faced by ship owners and officers with met-ocean data collection programs (Mr Erwann Gabriel - Brittany Ferries)</li> <li>• Looking forward: Ship-based observations are ready for a new leap through new technologies and innovative partnerships, in a stronger GOOS (Mr Mathieu Belbeoch - WMO/OceanOPS)</li> </ul>
11:00 – 11:30	Coffee Break	<b>Delegate Lounge 1<sup>st</sup> floor - Sponsored by UK Met Office</b>
11:30 – 12:30	<b>Panel Discussion</b>	<b>(Session 4 presenters)</b>
12:30 – 14:00	Lunch	
14:00 – 15:30	<p><b>Session 5: Dissemination of MetOcean Information to Ships</b></p> <p><i>Moderator: Captain Daniel Peixoto de Carvalho (Brazil CHM-DHN)</i></p>	<p><b>Objective:</b> Discuss the status of and possibilities for improving dissemination of metocean early warnings and forecasts to vessels and the maritime community, enabling seafarers to make sound routing and other operational decisions at sea.</p> <ul style="list-style-type: none"> <li>• Status of S-41X sea ice and weather overlays in S-100 based product specifications for Electronic Chart Display and Information Systems (Mr Geoff Dunsworth - Environment and Climate Change Canada)</li> <li>• SMART-Navigation: Implementing e-Navigation for Ships (Dr Sewoong Oh – KRISO, Republic of Korea)</li> <li>• Dissemination of MSI in the Polar Regions - Satellite coverage and user experience. (Mr Keld Qvistgaard - Danish Meteorological Institute, and Mr Alejandro de la Maza Dori3n - Chile SERVIMET)</li> <li>• Use of emerging technologies to support dissemination of MSI at sea (Dr Marcel Nicolaus - Alfred Wegener Institute, Germany)</li> </ul>
15:30 – 16:00	Tea Break	
16:00 – 17:00	<b>Panel Discussion</b>	<b>(Session 5 presenters)</b>
17:00 – 17:30	<b>Day 2 Summary</b>	

## Wednesday, 25 September 2024

Time	Session	Objectives / topics
9:30 – 11:00	<p>Session 6:  <b>Better Products and Services for Improved Weather Warnings and Forecasts</b></p> <p><i>Moderator: Mr Michael Martens (DWD)</i></p>	<p><b>Objective:</b> Explore how metocean products and services, including early warnings and services, can better meet seafarers' current and future needs to support safe and efficient maritime operations.</p> <ul style="list-style-type: none"> <li>• Optimizing ship routeing for safety, fuel efficiency, and reduced emissions (Dr Phillip Belcher - INTERTANKO)</li> <li>• Early warnings and impact-based forecasting for maritime safety (Captain Daniel Peixoto de Carvalho – Brazil CHM-DHN)</li> <li>• Metocean support for emergencies at sea, including both safety and environment related, and search and rescue (Dr Alice Soares, MetOcean consultant)</li> <li>• Products and services for cruise ships and tourism: how public and private sector providers support forecasts at sea (Mr Craig Setzer - Royal Caribbean Group)</li> </ul>
11:00 – 11:30	Coffee Break	<b>Delegate Lounge 1<sup>st</sup> floor - Sponsored by <i>Deutscher Wetterdienst (DWD)</i> - German Weather Service</b>
11:30 – 12:30	<b>Panel Discussion</b>	<b>(Session 6 presenters)</b>
12:30 – 14:00	Lunch	<p><b>Side Event: Metocean forecasting support in polar regions (45 minutes)</b>  <b>Moderator: Mr Erik de Groot (ECCC)</b></p> <p>Objective: Panellists will discuss ideas for working together to meet the unique challenges of providing metocean forecasting support to increased maritime activity in the polar regions in a changing environment</p> <ul style="list-style-type: none"> <li>• Mr Ian Lisk (WMO SERCOM and EC-PHORS)</li> <li>• Mr John Parker (International Ice Charting Working Group)</li> <li>• Mr Darin Figskey (US NOAA)</li> <li>• Dr Karolin Eichler (DWD, Germany)</li> </ul>
14:00 – 15:30	<p>Session 6 (Cont.)</p> <p><i>Moderator: Mr Ramon Oosterkamp (Met Service New Zealand)</i></p>	<ul style="list-style-type: none"> <li>• Metocean Information for SOLAS and Polar Code Requirements: Are user needs being met? (Dr Anita Mäkinen – IMO Sub-Committee on Pollution Prevention and Response)</li> <li>• Enhancing metocean support for non-SOLAS ships (Captain Derek Cardno - Scottish Fishermen's Federation, UK)</li> <li>• Weather safety for domestic ferry operations (Dr Nelly Florida Riama - Indonesia BMKG)</li> <li>• Role of non-government service providers in support of maritime operations (Ms Amy Buhl – Weathernews)</li> </ul>
15:30 – 16:00	Tea Break	<b>Cafeteria on 4th floor - Sponsored by <i>Weathernews</i></b>
16:00 – 17:00	<b>Panel Discussion</b>	<b>(Session 6 (Cont.) presenters)</b>
17:00 – 17:30	<b>Day 3 Summary</b>	

## Thursday, 26 September 2024

	Session	Objectives / topics
9:30 – 11:00	<p>Session 7: <b>Strengthening Collaboration</b></p> <p><i>Moderator: Mr John Parker (WMO SC-MMO)</i></p>	<p><b>Objective:</b> Discuss how to improve the dialogue across all sectors of the maritime and metocean communities to enhance safety at sea and strengthen continued collaboration after the Symposium.</p> <p><b>Speaking topics:</b> Panellists from various relevant maritime related organizations will discuss how improved collaboration in maritime weather support can better support their members. Similarly, representatives of meteorological agencies from various regions will discuss how they work within their nation/region to connect to authorities and work with users, as highlighted through examples specific to their geographic area.</p> <ul style="list-style-type: none"> <li>• Dr Bev McKenzie - BIMCO</li> <li>• Mr Jonathan Green (video) (Independent Cruise Tour Operator)</li> <li>• Captain Alvaro Scardilli (Argentina SHN)</li> <li>• Mr Kenneth Kerr (Caribbean Meteorological Organization (CMO))</li> <li>• Professor Dwikorita Karnawati (Indonesia BMKG)</li> </ul>
11:00 – 11:30	Coffee break	<b>Cafeteria on 4th floor - Sponsored by <i>Badan Meteorologi, Klimatologi, dan Geofiska (BMKG) (Indonesia)</i></b>
11:30 – 12:30	<p>Session 8: <b>Bridging the Knowledge Gap Towards Safer Shipping – Summary Conclusion</b></p>	<p><b>Objective:</b> Summary of key outcomes and issues emerging from the Symposium and looking to the future</p> <ul style="list-style-type: none"> <li>• Mr Ian Lisk (WMO SERCOM)</li> </ul>
12:30	<b>Closing of Symposium</b>	

Updated 24 September 2024