INVESTING IN OCEAN FUTURES:
Finance and Innovation for the Blue Economy

Paris / 20 - 22 November 2019
# SCHEDULE AT A GLANCE

## DAY 1 – CONFERENCE
**WEDNESDAY 20 NOVEMBER**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Side Event: ARICE Workshop <em>(Invitation only)</em></td>
<td>Le Salon 3 Consuls</td>
</tr>
<tr>
<td>12:00</td>
<td>~ WOC Members Lunch *(WOC Members only) ~</td>
<td>Les 3 Salons</td>
</tr>
<tr>
<td>13:15</td>
<td>Welcome and Introductory Remarks</td>
<td>Salons Lumière et Montgolfier</td>
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<tr>
<td>13:30</td>
<td>Plenary Session: Ocean Executive Forum: The Signature SOS Multi-Sector Panel of CEOs</td>
<td>Salons Lumière et Montgolfier</td>
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<tr>
<td>15:00</td>
<td>~ Afternoon Break ~</td>
<td>Les 3 Salons</td>
</tr>
<tr>
<td>15:30</td>
<td>Plenary Session: Investing in the Blue Economy: The Role of Institutional Investors, Banks and Investment Firms in Ocean Sustainable Development</td>
<td>Salons Lumière et Montgolfier</td>
</tr>
<tr>
<td>17:00</td>
<td>~ Late Afternoon Break ~</td>
<td>Les 3 Salons</td>
</tr>
<tr>
<td>17:30</td>
<td>Parallel Sessions:</td>
<td></td>
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<tr>
<td>19:30</td>
<td>~ SOS Cocktail Reception ~</td>
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</tbody>
</table>

## DAY 2 – CONFERENCE
**THURSDAY 21 NOVEMBER**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Parallel Sessions:</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>1. Ocean Funds: Focused Finance for Sustainable Seas</td>
<td>Salons Lumière et Montgolfier</td>
</tr>
<tr>
<td>17:00</td>
<td>3. Port Resiliency to Sea Level Rise and Extreme Events: Private Sector Collaboration to Advance Infrastructure Adaptation, especially for Small Islands and Developing Countries</td>
<td>Le Salon 3 Consuls</td>
</tr>
<tr>
<td>19:30</td>
<td>4. Social License and the Blue Economy: Roles, Responsibilities and Opportunities for Innovation</td>
<td>Bibliothèque Lasteyrie</td>
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<tr>
<td>10:00</td>
<td>~ Morning Break ~</td>
<td>Les 3 Salons</td>
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*Version: 23 October 2019*

Note that the SOS 2019 Draft Program is subject to changes.

Speakers marked with * are pending confirmation.
<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:30</td>
<td><strong>Plenary Session:</strong> The Navy and Maritime Industries: Exploring Synergies in Ocean Sustainable Development, Safety, Security and Stewardship</td>
<td>Salons Lumière et Montgolfier</td>
</tr>
<tr>
<td>12:00</td>
<td><strong>Lunch (All SOS Delegates)</strong></td>
<td>Les 3 Salons</td>
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<tr>
<td>12:00</td>
<td><strong>Special Lunch Forum</strong></td>
<td>Le Salon 3 Consuls</td>
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<tr>
<td>12:00</td>
<td>Global Blue Economy Innovation Network: Accelerators, Incubators and Challenge Competitions for Ocean Sustainable Development</td>
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<tr>
<td>13:30</td>
<td><strong>Parallel Sessions:</strong></td>
<td></td>
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<tr>
<td></td>
<td>1. Investing in People: Young Ocean Professionals, Sustainable Development and Jobs in the Blue Economy</td>
<td>Salons Lumière et Montgolfier</td>
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<td>2. Seabed 2030: Accelerating Ocean Industry Leadership on Global Seafloor Mapping</td>
<td>Le Salon 3 Consuls</td>
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<tr>
<td>15:00</td>
<td><strong>Afternoon Break</strong></td>
<td>Les 3 Salons</td>
</tr>
<tr>
<td>15:30</td>
<td><strong>Plenary Session:</strong> Women in Ocean Industries: Leadership, Sustainable Development and Maritime Security</td>
<td>Salons Lumière et Montgolfier</td>
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<tr>
<td>17:00</td>
<td><strong>Late Afternoon Break</strong></td>
<td>Les 3 Salons</td>
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<tr>
<td>17:30</td>
<td><strong>Parallel Sessions:</strong></td>
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<tr>
<td></td>
<td>1. Impact Investment, Blended Finance and the Blue Economy</td>
<td>Salons Lumière et Montgolfier</td>
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<td></td>
<td>2. Blue Economy Blockchain: Linking Around the World and Across the Sectors for Ocean Sustainable Development</td>
<td>Le Salon 3 Consuls</td>
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<tr>
<td></td>
<td>3. Port Reception Facilities: Investing in Plastics/Marine Debris Disposal Infrastructure at a Global Scale</td>
<td>Bibliothèque Lasteyrie</td>
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**DAY 3 – CONFERENCE**
**FRIDAY 22 NOVEMBER**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>08:30</td>
<td><strong>Plenary Session:</strong> COPERNICUS Collaborative Vision for a Sustainable Ocean: Investment and Innovation for Ocean Data and Deliverables</td>
<td>Salons Lumière et Montgolfier</td>
</tr>
<tr>
<td>10:00</td>
<td><strong>Morning Break</strong></td>
<td>Les 3 Salons</td>
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<tr>
<td>10:30</td>
<td><strong>Parallel Sessions:</strong></td>
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<tr>
<td></td>
<td>1. Corporate Investment and Philanthropy for Ocean Sustainable Development Solutions</td>
<td>Salons Lumière et Montgolfier</td>
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<td></td>
<td>2. Moving Commercial Seafood to Sustainability: Innovation and Investment</td>
<td>Salon Chaptal</td>
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<td></td>
<td>3. Offshore Energy: Oil and Gas Industry Role in Advancing Offshore Renewables</td>
<td>Le Salon 3 Consuls</td>
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</tbody>
</table>
### Responsible Deep Sea Mining

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<thead>
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<tbody>
<tr>
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<tr>
<td>12:00</td>
<td>~ Special Lunch Forum ~</td>
<td>Le Salon 3 Consuls</td>
</tr>
<tr>
<td>12:00</td>
<td>Roundtable of Ocean Industry Association Leaders (ROIAL)</td>
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### Parallel Sessions:

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>13:30</td>
<td>1. The Digital Ocean, Big Ocean Data and the Ocean Cloud</td>
<td>Salons Lumière et Montgolfier</td>
</tr>
<tr>
<td>13:30</td>
<td>2. De-Risking Investment in the Blue Economy: The Role of the Ocean/Maritime Legal and Insurance Communities</td>
<td>Le Salon 3 Consuls</td>
</tr>
<tr>
<td>15:00</td>
<td>~ Afternoon Break ~</td>
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<tr>
<td>15:30</td>
<td>1. Public Funding for the Blue Economy: Multi-Lateral Development Banks for Risk Mitigation and ODA for Ocean Sustainable Development</td>
<td>Salons Lumière et Montgolfier</td>
</tr>
<tr>
<td>15:30</td>
<td>2. Blue Worlds: The ESA Initiative Towards Space Projects Support for Sustainable Ocean Activities – The Case of Autonomous Shipping</td>
<td>Le Salon 3 Consuls</td>
</tr>
<tr>
<td>17:00</td>
<td>~ Late Afternoon Break ~</td>
<td>Les 3 Salons</td>
</tr>
<tr>
<td>17:30</td>
<td>Plenary Session: Ocean 2030: Blue Economy Business Projections (covering ocean transportation, energy, food, tourism and minerals)</td>
<td>Salons Lumière et Montgolfier</td>
</tr>
<tr>
<td>18:50</td>
<td>Plenary Session: Closing Remarks from WOC</td>
<td>Salons Lumière et Montgolfier</td>
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</tbody>
</table>
Investing in the Blue Economy: The Role of Institutional Investors, Banks and Investment Firms in Ocean Sustainable Development

**Framing questions**
- What are the experience, barriers and risks for institutional investment, banking and investment firms to work with ocean industries and sustainable development?
- Can existing investment programs targeting ocean industries (e.g. shipping, fishing, aquaculture, etc.) transition to including sustainable development and scale up investor interest across the ocean economy?
- How are ocean dimensions assessed across entire portfolios, and which ocean industry sectors or issues are most relevant to investors?

**Chair/Moderator**
- Jacques Demers, Chair, York University Pension Fund

**Speakers/Panel**
- Philippe Desfossés, CEO (ret.), French Public Service Additional Pension Scheme (ERAFP)
- Laurence Pessez, Director, Group Corporate Social Responsibility, BNP Paribas
- Michael van Niekerk, Managing Director, Peakview Strategy
- Céline Labelle, Shipping Finance Professional
- Divaldo Rezende, Global Head of Climate and Social Finance, Aenergy
## Impact Investment, Blended Finance and the Blue Economy

### Framing questions
- What is the role of “Impact Investing” in addressing the complex, long term, global challenges of ocean sustainable development?
- Is “Blended Finance” necessary to ensure that investment in the Blue Economy can achieve the temporal and spatial scale needed to tackle these issues?
- How can impact investors best engage and partner with the other components of the investment community to develop blended finance arrangements for ocean sustainable development?

### Chair/Moderator
- TBD

### Speakers/Panel
- Michael Adams, President, Ocean Assets Institute
- Nicolas Pascal, Director, Blue Finance
- Jean-Paul D’Offay, Director Regional Integration, International Cooperation and Regional Integration Division, Department of Foreign Affairs, Seychelles
- Valeria Ramundo Orlando, Vice President, Blended Finance, Rare
- Laurent Develle, Attorney at Law, Of Counsel, Froriep Legal S.A.
- Jan Yoshioka, Director, Ocean Investments, Conservation International Ventures LLC *

## Ocean Funds: Focused Finance for Sustainable Seas

### Framing questions
- Why is there a need for specialized funds on ocean topics and sectors?
- What is the experience to date in developing and implementing funds dedicated to the Blue Economy and innovation?
- What is needed for ocean funds to deliver both meaningful, scalable sustainability impact as well as competitive market returns?

### Chair/Moderator
- Michael Adams, President, Ocean Assets Institute

### Speakers/Panel
- Jacques Demers, Chairman and Managing Partner, AGAWA Partners
- Olivier Raybaud, Founding Partner, Blue Oceans Partners
- Simon Dent, Blue Investments Director, Althelia Funds
- Juergen Zeitlberger, Programme Officer, Blue Natural Capital Financing Facility (BNCFF)
- Francisco Saraiva Gomes, CEO, Pontos Aqua
Corporate Investment and Philanthropy for Ocean Sustainable Development Solutions

Framing questions
• Are major ocean industries or non-ocean industries investing directly in ocean sustainable development and innovation, or is this being pursued via corporate philanthropic efforts?
• What approaches are being used to identify and curate the priority issues and the candidates for investment, and how best to replicate and scale up successful corporate investment in sustainable development solutions?
• What has been the experience to date with corporate investors or philanthropic foundations engaging directly with the private sector on ocean sustainable development, biodiversity conservation, supporting sustainable fisheries, reducing illegal fishing, etc.?

Chair/Moderator
• TBD

Speakers/Panel
• Vincent Doumeizel, Vice President, Food & Sustainability, Lloyd’s Register Foundation
• Wassim Daoud, Head of Sustainability and CSR, Ponant Foundation
• Sabine Miltner, Program Director, Conservations and Markets Initiatives, Gordon and Betty Moore Foundation
• Rob Johnson, Managing Director, Sea Pact
Public Funding for the Blue Economy: Multi-Lateral Development Banks for Risk Mitigation and ODA for Blue Economy Investment

Framing questions
• What is the role of multi-lateral and public development banks in mitigating risk as a key enabling condition for increased private financing of the sustainable Blue Economy?
• What is the role of bilateral Official Development Assistance (ODA) in advancing ocean sustainable development?
• What are the barriers or constraints to optimizing the role of public funding in support of increased private financing of the sustainable Blue Economy, and how can these be addressed?

Chair/Moderator
• TBD

Keynote Speaker
• Emma Navarro, Vice President, European Investment Bank (EIB) *

Speakers/Panel
• Rémy Rioux, Directeur Général, French Development Agency (AFD) *
• Charlotte Gardes, Deputy Head of the Financial Stability, Accounting Standards and Corporate Governance Unit, Ministère de l’Économie et des Finances, France
• Karin Kemper, Senior Director, Environment and Natural Resources Global Practice, World Bank *
• Gerard Alleng, Inter-American Development Bank (IDB) *
• Piera Tortora, Coordinator, Sustainable Ocean for All, OECD
• Jason Fleming, Development Credit Authority, U.S. Agency for International Development (USAID)
• Briony Coulson, Head, Ocean, Climate Change and Plastic Pollution, UK Department for Environment, Food and Rural Affairs (Defra) *
# De-Risking Investment in the Blue Economy: The Role of the Ocean/Maritime Legal and Insurance Communities

## Framing questions
- What is the role of the ocean/maritime insurance and legal communities in relation to the risks, concerns and constraints associated with expanding ocean economic activity?
- What are the priority ocean development and sustainability risks and issues for engaging the insurance and legal communities?
- How can the ocean/maritime insurance and legal community best coordinate its efforts globally with the ocean business community and the ocean investment and innovation communities?

## Chairs/Moderators
- Liv Monica Stubholt, Partner, Selmer
- Jonathan Webb, Partner, Holman Fenwick Willan

## Speakers/Panel
- Richard Turner, Managing Director, RSA Insurance Group; President, International Union of Marine Insurance (IUMI)
- Falk Niehörster, Head of Catastrophe Research, DEVK Re; Founder, Director, Climate Risk Innovations
- Chip Cunliffe, Director, Sustainable Development, AXA XL - Ocean Risk and Resilience Action Alliance (ORRAA)
- Representative, Norton Rose Fulbright
- Joshua Brien, Special Advisor, Cooley LLP
- Dazhen Zhang, Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong
1. Welcome and Introduction by the European Commission and UNEP Finance Initiative
   - How is the Blue Economy relevant to financial institutions?
   - Overview of the Sustainable Blue Economy Finance Principles
   - Responsible Investor Survey Preliminary Findings

2. Examples of Finance Sector Action on the Blue Economy
   Presentations on actions that financial institutions and other key stakeholders are taking to contribute to financing the Blue Economy, illustrating ways in which the Principles can be implemented.
   - Wilhelm Mohn, Head of Sustainability, Corporate Governance Area, Norges Bank Investment Management (NBIM) *
   - Eli Lund, Head of Secretariat, Council on Ethics, Norwegian Government Pension Fund Global *
   - Hiro Mizuno, Executive Managing Director, Japan Government Pension Investment Fund (GPIF) *
   - Abigail Herron, Global Head of Responsible Investment, Aviva Investors’ Sustainable Fisheries Partnership for Sustainable Seafood and Responsible Investment *
   - TBD, BNP Paribas
   - TBD, Global Fund for Coral Reefs
   - Chip Cunliffe, Director, Sustainable Development, AXA XL
   - TBD, Swiss Re

3. Structured Table Discussions
   Exploring opportunities for financial institutions to implement the Principles.

4. Table Report Back and Session Summary

Outcome
   A briefing on key take-aways to inform the next steps of the Sustainable Blue Economy Finance Initiative. Participants will have the opportunity to join the community of practice under the Initiative.
| **Blue Economy Blockchain:**  
**Linking Around the World and Across the Sectors for Ocean Sustainable Development** |
|---|

**Framing questions**
- Which ocean business sectors have been the focus of efforts to apply blockchain, and what are the progress and challenges in developing blockchain in these sectors?
- Are there opportunities to develop synergies among the ocean sectors which are working to implement blockchain?
- What is the role of blockchain in the sharing of market data, scientific data, payment, investment to best facilitate ocean sustainable development, and is there a role for blockchain as a broader, framework role for ocean economic governance and sustainability?

**Chair/Moderator**
- Fred Sullivan, Founder and CEO, Venture Acceleration

**Speakers/Panel**
- Deanna MacDonald, Founder and CEO, BLOC
- Stefan Kukman, CEO, CargoX
- Walter Purio, Chairman and Founder, QuayChain Pte Ltd
- Jens Paulsen, Manager, Deloitte Blockchain Institute
- Peter McBurney, Head, Technology Consulting, Norton Rose Fulbright
### SPECIAL FORUMS

#### Global Blue Economy Innovation Network:
**Accelerators, Incubators and Challenge Competitions for Ocean Sustainable Development**

<table>
<thead>
<tr>
<th>Framing questions</th>
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<tbody>
<tr>
<td>How can the growing ocean innovation “ecosystem”, i.e. accelerators, incubators, challenge competitions, etc. best connect and collaborate to optimize addressing ocean sustainable development challenges?</td>
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<tr>
<td>Which ocean sustainable development issues would be best served by improved communication and synergies among the ocean innovation “ecosystem”?</td>
</tr>
<tr>
<td>How can the Ocean Business and Investment Community best engage with the innovation “ecosystem” to develop, deliver and implement solutions in support of the Blue Economy?</td>
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**Chair/Moderator**
- Paul Holthus, Founding President and CEO, World Ocean Council

**Co-Facilitators**
- Ronny Waage, Founder and Managing Director, Heron Advisory
- Joshua Berger, Founder/Board Chair, Washington Maritime Blue
- Mark Huang, Co-Founder and Managing Director, SeaAhead *
- Maren Hjorth Bauer, CEO and Co-founder, Katapult Ocean *
- David Hume, Founder, Liquid Grid *

**Participants**
- More than 30 ocean sustainability related accelerators, incubators and challenge competitions have been invited to send a representative to the inaugural gathering of the Global Blue Economy Innovation Network
- To date, more than 10 of these organizations, programs or initiatives have indicated that they will participate in the Global Blue Economy Innovation Network forum at the SOS 2019

Note that the SOS 2019 Draft Program is subject to changes. Speakers marked with * are pending confirmation.
### Roundtable of Ocean Industry Association Leaders (ROIAL)

#### Framing questions
- How can ocean industry associations work together to advance global business leadership, collaboration and action on “Corporate Ocean Responsibility” at the scale and pace needed to address ocean challenges?
- What are the priority sustainable development challenges facing ocean industries, synergy and coordination in the Ocean Business Community?
- From among those challenges, which can be best addressed by ocean industry associations interacting?

#### Chair/Moderator
- Paul Holthus, Founding President and CEO, World Ocean Council

#### Participants
- More than 60 ocean related industry and investment organizations have been invited to send a representative to the 2nd ROIAL gathering
- To date, nearly 20 of these organizations have indicated that they will participate in the ROIAL forum at SOS 2019
PLENARY SESSIONS

Ocean Executive Forum: The Signature SOS Multi-Sector Panel of CEOs

Framing questions
- What is the ocean industry CEO perspective on ocean economic activity to 2030, especially in relation to ocean economy investment and innovation opportunities?
- What opportunities and risks do ocean industry CEOs think that these scenarios create for each sector, for the ocean economy and ocean business community overall, and for the ocean itself?
- How do ocean industry leaders view the Sustainable Development Goals (SDGs) in relation to projected ocean economic activity and future risks and opportunities?

Chair/Moderator
- Paul Holthus, Founding President and CEO, World Ocean Council

Keynote Speaker
- Shipping: Philippe Louis-Dreyfus, Chairman, Louis Dreyfus Armateurs

Panel
- Ocean Data and Technology: Oliver Plunkett, CEO, Ocean Infinity
- Aquaculture: Anne-Kristine Øen, Managing Director, Salmon Group
- Ocean Energy: Laurent Albert, CEO, Seabased *
- Submarine Cables: Didier Dillard, CEO, Orange Marine
- Seabed Mining: Greg Stemm, Founder and CEO, Odyssey Marine Exploration
- Cruise Tourism: TBD
- Fisheries: TBD
- Offshore Energy: Bart Boesmans, Deputy Managing Director, ENGIE
- Classification: Bruno Dabouis, CEO, Marine and Offshore (North America, South Europe, North Africa), Bureau Veritas

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Speakers marked with * are pending confirmation.
### Ocean 2030: Blue Economy Business Projections
*(covering ocean transportation, energy, food, tourism and minerals)*

#### Framing questions
- What is the future of industry activity in key ocean economic sectors, and what investment and innovation opportunities will this generate?
- What are the key trends, geographies, assumptions, opportunities and constraints for each sector through to 2030, the time frame of the U.N. SDGs?
- What opportunities and risks do these scenarios create for each sector, for the ocean economy and ocean business community overall, and for the ocean itself?

#### Chair/Moderator
- Claire Jolly, Head, Innovation Policies for Space and Oceans, Directorate for Science, Technology and Innovation, OECD

#### Speakers/Panel
- **Shipping**: Stuart Neil, Communications Director, International Chamber of Shipping (ICS)
- **Ocean Energy**: Rémi Gruet, CEO, Ocean Energy Europe
- **Offshore Wind Energy**: Gunnar Herzig, Managing Director, World Forum Offshore Wind (WFO)
- **Oil and Gas**: TBD
- **Fisheries**: TBD
- **Aquaculture**: Andrew Mallison, CEO, Global Aquaculture Alliance (GAA)
- **Cruise Tourism**: Tom Boardley, Secretary General, Cruise Lines International Association (CLIA) Europe
- **Seabed Mining**: TBD
- **Submarine Cables**: TBD
### Women in Ocean Industries: Leadership, Sustainable Development and Maritime Security

#### Framing questions
- How well is women’s leadership in the Ocean Business Community advancing, and how does this relate specifically to ocean sustainable development and the Blue Economy?
- What are the challenges and opportunities for better advancing leadership by women in the Ocean Business Community, especially regarding sustainable development and maritime security?
- What synergies can be developed between maritime security, sustainable development and women’s leadership to improve the opportunities for investment in the Blue Economy?

#### Chair/Moderator
- Christine Ezcutari, Partner, Norton Rose Fulbright *

#### Speakers/Panel
- Manoelle Lepoutre, Senior Vice President, Total
- Edie Rodriguez, Americas Brand Chairwoman, Ponant Cruises
- Lori Forman, Development Advisor and Professor, Asia-Pacific Center for Security Studies
- Margaret Hepburn, CEO, Hepburn Bio Care
- Tenke Zoltani, Founder, Better Finance
- Pia Berglund, National Coordinator of Short Sea and Inland Waterways, Trafikverket *
- TBD, French Navy *

### COPERNICUS Collaborative Vision for a Sustainable Ocean: Investment and Innovation for Ocean Data and Deliverables

#### Framing questions
- How can EU policy makers advance the role of entrepreneurs, services and industries in developing innovation for ocean monitoring in support of the Blue Economy, such as the Copernicus program?
- How can the Digital Ocean and cloud-based solutions help support innovation for ocean monitoring and ocean sustainable development?
- What are the investment needs and opportunities for improving and expanding ocean monitoring for the Blue Economy?

#### Chair/Moderator
- Christine Valentin, COO, World Ocean Council

#### Speakers/Panel
- Pierre Bahurel, CEO, Mercator Ocean International
- Kamil Kiljanski, Head of Space Data Unit, DG Grow, European Commission *
- Felix Leinemann, Head of Blue Growth Unit, DG Mare, European Commission *
- Vladimir Ryabinin, Executive Secretary, UNESCO Intergovernmental Oceanographic Commission (IOC) *
- Rémi Gruet, CEO, Ocean Energy Europe
- TBD, Artelia, Suez
- TBD, Finance Representative
### The Navy and Maritime Industries: Exploring Synergies in Ocean Sustainable Development, Safety, Security and Stewardship

<table>
<thead>
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<tbody>
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<td>What issues in ocean sustainable development does the Navy share with the commercial ocean industries?</td>
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<tr>
<td>What are the opportunities for developing synergies between the Navy and ocean industries in tackling these issues?</td>
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<tr>
<td>How can the Navy and Ocean Business Community best develop and implement collaborative activities on specific areas of mutual interest?</td>
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<table>
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<th><strong>Keynote Speaker</strong></th>
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<tbody>
<tr>
<td>Admiral Christophe Prazuck, Head of the French Navy</td>
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<tbody>
<tr>
<td>Tom Drake, Head, Ocean Battlespace and Expeditionary Access Department, Office of Naval Research (ONR)</td>
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<tr>
<td>Hervé Guillou, Chairman and CEO, Naval Group *</td>
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<tr>
<td>Catherine Warner, Director, Centre for Maritime Research and Experimentation (CMRE), NATO *</td>
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<tr>
<td>Jessica Berry, CEO, Maritime Archaeology Sea Trust (MAST); Vice Admiral Anthony Dymock, Trustee, MAST; Bradley Soule, Chief Analyst, OceanMind</td>
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**SDG 14.c** Ensure the full implementation of international law, as reflected in the United Nations Convention on the Law of the Sea for States parties thereto, including, where applicable, existing regional and international regimes for the conservation and sustainable use of oceans and their resources by their parties.

<table>
<thead>
<tr>
<th>U.N. Law of the Sea: New Legally Binding Instrument on Biodiversity in Areas Beyond National Jurisdiction (BBNJ) and Ocean Industries</th>
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<tbody>
<tr>
<td><strong>Framing questions</strong></td>
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<tr>
<td>• How will the legally binding BBNJ agreement affect ocean industries when it is adopted in 2020?</td>
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<td>• What are the risks to ocean industries for not participating in the negotiations or providing input to the treaty text as the BBNJ agreement is developed by countries?</td>
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<tr>
<td>• How can and should ocean industries engage with each other and with other ocean stakeholders, including governments, as the BBNJ agreement moves to its final negotiation in early 2020?</td>
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<tr>
<td><strong>Chair/Moderator</strong></td>
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<tr>
<td>• Serge Segura, Ambassador for the Oceans, France</td>
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<td><strong>Speakers/Panel</strong></td>
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<tr>
<td>• Rena Lee, President, Intergovernmental Conference (IGC) of the BBNJ *</td>
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<td>• Francois Bailet, Senior Legal Officer, U.N. Division for Ocean Affairs and the Law of the Sea (DOALOS)</td>
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<td>• TBD</td>
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<tr>
<td>- <a href="#">Marine Genetic Resources and the BBNJ Treaty</a></td>
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<td>• Paul Holthus, Founding President and CEO, World Ocean Council</td>
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<tr>
<td>- <a href="#">BBNJ Treaty: What Ocean Industries Need to Know</a></td>
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</table>
Responsible Deep Sea Mining

Framing questions
- What are the opportunities but also the challenges for advancing responsible deep-sea mining, e.g. protection of environment, technology, regulatory, financing?
- What innovations are needed to ensure deep sea mining addresses these challenges?
- What role can the investment community play in advancing deep sea mining?

Chair/Moderator
- Francis Vallat, Founding and Honorary Chairman, French Maritime Cluster and European Network of Maritime Clusters

Speakers/Panel
- Francis Vallat, Deepsea Mining Group, French Maritime Cluster
  - General Introduction to Deep Sea Mining and the French Maritime Industry Approach
- Johannes Post, Managing Director, DeepSea Mining Alliance (DSMA)
  - The Deep Sea Mining Alliance - An Integrated Approach for Responsible Deep Sea Mining
- Jean-Marc Sornin, President, ABYSSA
  - How to Increase Knowledge of the Deep Seabed and Evaluate Environmental Requirements
- Greg Stemm, Founder and CEO, Odyssey Marine Exploration *
- Henk van Muijen, Managing Director, IHC Mining *
**SDG 14.2** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

**SDG 14.3** Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

**SDG 14.a** Increase scientific knowledge, develop research capacity and transfer marine technology

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**Port Resiliency to Sea Level Rise and Extreme Events: Private Sector Collaboration to Advance Infrastructure Adaptation, especially for Small Islands and Developing Countries**

**Framing questions**

- How can the ocean business and investment community best ensure that ports and essential coastal infrastructure are being adapted to ensure resiliency during extreme events, especially in small islands and developing countries?
- How can the Ocean Business Community best collaborate with other key stakeholders, e.g. multilateral/bilateral development assistance, national governments, science institutions, etc.?
- What is the best way to develop and implement a global, multi-stakeholder leadership alliance to ensure ports and coastal infrastructure worldwide are ready, resilient and able to minimize the impacts of extreme events on communities, businesses and economies?

**Chair/Moderator**

- TBD

**Speakers/Panel**

- Richard Ornitz, Chairman, Infralinx Capital Partners LLC
- Greg Fisk, Business Development Director, BMT
- Shimrit Perkol-Finkel, Co-Founder and CEO, ECOcrete
- Brigitte Vlaswinkel, Research Director, Oceans of Energy
- Nicolas Swetchine, Group Head, International Key Accounts and Infrastructure Markets, LaFargeHolcim
Ocean NETs: Responsible Negative Emissions Technologies (NETs) for CO2 Sequestration at Sea

Framing questions
- What are the requirements of the International Climate Agreement (Paris 2015) for negative emissions technologies (NETs) to remove atmospheric CO2 to meet planetary safe limits for global temperatures?
- What is the state of information on the potential ocean-based NETs, what science is available on them, and what are the risks and benefits of Ocean NETs?
- What is needed to advance careful, science-based consideration of Ocean NETs as a potentially viable, important means to address increasing atmospheric CO2, and what are the investment opportunities associated with this?

Chair/Moderator
- John Ridley, Managing Director, Ocean Nourishment

Speakers/Panel
- Wil Burns, Founding Co-Executive Director, Forum for Climate Engineering Assessment; Professor of Research/Co-Director, Institute for Carbon Removal Law and Policy, American University
- Richard Sanders, Director ICOS Ocean Thematic Centre, Norwegian Research Centre
- John Munford, CEO, Marine Resource Management
- Philip Kithil, CEO, Ocean-based Climate Solutions

Ocean Energy: Scaling Up Low Carbon Energy from the Sea

Framing questions
- What are the status and prospects for ocean energy: wave, tidal, current, ocean thermal energy conversion (OTEC)?
- What are the barriers to scaling up ocean energy?
- What are the investment opportunities for expanding and accelerating offshore wind and ocean renewable energy?

Chair/Moderator
- Britta Schaffmeister, CEO, Dutch Marine Energy Centre

Speakers/Panel
- Laurent Albert, CEO, Seabased (wave power)
- Jean-Christophe Allo, Commercial Director, Sabella (tidal power)
- Rémi Gruet, CEO, Ocean Energy Europe
**Offshore Energy: Oil and Gas Industry Role in Advancing Offshore Renewables**

**Framing questions**
- How is the oil and gas industry transforming into the offshore energy industry and supporting the development of offshore renewable energy?
- How can the offshore energy industry best accelerate the transition to offshore renewable energy, e.g. through investment, technology transfer, expertise, etc.?
- What are the scenarios for a more integrated portfolio of ocean-based energy sources in the future?

**Chair/Moderator**
- Dan Shurey, Head, Green and Sustainable Finance, Bloomberg New Energy Finance *

**Speakers/Panel**
- Patrik Möller, CEO, CorPower Ocean
- Guillaume Ardoise, Senior Technical Manager - Europe, Principle Power
- Dan Kyle Spearman, Manager, Offshore Wind Program, Carbon Trust
- Amélie Elkik, Sciences Po Paris
- Knut Vassbotn, Head of Business Development, Offshore Wind, Aker Solutions *
- Barbara Burger, President, Chevron Technology Ventures *
- Elisabeth Brinton, Global VP Strategy and Portfolio, New Energies, Royal Dutch Shell *

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Version: 23 October 2019

Note that the SOS 2019 Draft Program is subject to changes. Speakers marked with * are pending confirmation.
SDG 14.a  Increase scientific knowledge, develop research capacity and transfer marine technology

U.N. Decade of Ocean Science and SMART Ocean-SMART Industries: Advancing Ocean and Climate Data Collection from Ships and Platforms

Framing questions
- What is the most effective way to coordinate between ocean scientists and ocean industry operators in order to engage industry in data collection and sharing in support of the U.N. Decade of Ocean Science?
- What are the investment opportunities linked to greater industry involvement in data collection and sharing, and how can these be developed?
- What are the priority locations, topics and technology to engage more ships and platforms of opportunity in collecting data?

Chair/Moderator
- TBD

Speakers/Panel
- Vladimir Ryabinin, Executive Secretary, UNESCO Intergovernmental Oceanographic Commission (IOC) *
- Veronica Willmott Puig, Project Manager ARICE, International Cooperation Unit, Alfred Wegener Institute
- Amos Barkai, CEO, OLSPS
Seabed 2030: Accelerating Ocean Industry Leadership on Global Seafloor Mapping

Framing questions
- What is Seabed 2030, how is it important to the Ocean Business Community and sustainable development, and how does it relate to the World Ocean Council’s Smart Ocean – Smart Industries Ocean Platform?
- How can ocean industry operators share existing bathymetric data to support improving seabed knowledge and mapping and/or collect and contribute crowdsourced bathymetry data to Seabed 2030?
- What are the technologies, procedures and practices for collecting new bathymetric data that can contribute to Seabed 2030?

Chair/Moderator
- TBD

Speakers/Panel
- Paul Holthus, Founding President and CEO, World Ocean Council
  - WOC SMART Ocean-SMART Industries Program; Decade of Ocean Science
- Helen Snaith, Head of Seabed 2030 Global Centre, British Oceanographic Data Centre, National Oceanography Centre, UK
  - Seabed 2030 Institutional/Project Situation and Aims
- Evert Flier, Norwegian Mapping Authority Hydrographic Service; Member, Crowd-sourced Bathymetry Working Group, International Hydrographic Organization (IHO)
  - Crowd-based Bathymetry: What It Is, How To Do It, How To Get Involved
- David Millar, Government Accounts Director, Americas, Fugro
  - Case Study: Industry Provision of Seabed Data
- Bjørn Jalving, Executive Vice President, Subsea, Kongsberg Maritime *
  - Technology for Seabed Mapping: How Collected Data are Integrated Into the Seabed 2030
### The Digital Ocean, Big Ocean Data and the Ocean Cloud

**Framing questions**
- What are the status, trends and forecasts for the development of the Digital Ocean, Big Ocean Data and the use of Cloud Computing for ocean sustainable development?
- What are the benefits (economic, sustainability, operational oceanography, maritime security, etc.) from a Digital Ocean that produces Big Ocean Data and harnesses Cloud Computing in support of Agenda 2030, and what are the challenges to achieving these benefits?
- What are the opportunities for better industry leadership and collaboration in advancing the Digital Ocean, Big Ocean Data and Cloud Computing for the Blue Economy?

**Chair/Moderator**
- Sofia Fürstenberg, Innovation and Sustainability Advisor, Fürstenberg Maritime Advisory

**Speakers/Panel**
- Yanis Souami, CEO, SINAY - Marine Data Solution
- Mogens Mathiesen, Senior Vice President, Head of Strategy and Partnerships, Ocean Data Platform Foundation
- Peter Bjerager, interim CEO, Digital Solutions, DNV GL *
- Walter Kuehnlein, Chairman, Board of Directors, German Association for Marine Technology (GMT)
- Isabelle Duvaux-Béchon, Head, Member States Relations and Partnerships Office, European Space Agency (ESA)
- Jan-Bart Calewaert, Head, EMODnet Secretariat, European Marine Observation and Data Network (EMODnet)

### Blue Worlds: The ESA Initiative Towards Space Projects

**Support for Sustainable Ocean Activities – The Case of Autonomous Shipping**

**Framing questions**
- What is the European Space Agency (ESA) “Blue Worlds” initiative?
- What are the shipping/maritime world’s challenges to develop and implement automation tools for ship navigation, situational awareness and ultimately autonomous shipping?
- How can space projects, data and technology existing today improve and increase support to activities linked to autonomous shipping?
- What gaps could be covered by future systems (in earth observation, telecommunication, positioning, technology, etc.), and where could some coordinated work and planning be beneficial to make sure that the user needs are taken into consideration?

**Chair/Moderator**
- Isabelle Duvaux-Béchon, Head, Member States Relations and Partnerships Office, European Space Agency (ESA)

**Speakers/Panel**
- TBD, Representatives from Earth Observation, Integrated Applications
### MARINE POLLUTION/IMPACTS

**SDG 14.1**  By 2025, prevent and significantly reduce marine pollution of all kinds, including marine debris and nutrient pollution

**SDG 14.2**  By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

**SDG 14.a**  Increase scientific knowledge, develop research capacity and transfer marine technology

| Port Reception Facilities:  
Investing in Plastics/Marine Debris Disposal Infrastructure at a Global Scale |
|---|
| **Framing questions**  
- What is needed to mobilize a global effort to ensure that adequate, economically viable port waste reception facilities are available worldwide, especially in developing country port cities?  
- What models, examples, and best practices exist for scaling up port waste reception facility development, and what are the investment opportunities?  
- How can port users (shipping, cruise tourism, oil and gas, fisheries, renewable energy, etc.) collaborate with each other and with the investment community (public and private) to advance industry leadership in reducing plastics/marine debris through port reception facilities? |

| **Chair/Moderator** | Sophie Delair, Secretary General, Euroshore * |
| **Speakers/Panel** | Vincent Favier, CEO, Ecoslops  
David Turton, CFO and Company Director, SeaBin |
### SDG 14.4
By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans

### SDG 14.6
By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies

<table>
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<tr>
<th>Moving Commercial Seafood to Sustainability: Innovation and Investment</th>
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<tr>
<td><strong>Framing questions</strong></td>
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<tr>
<td>• What are the priority innovations that leadership fishing and aquaculture companies would like to see, especially regarding sustainability?</td>
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<td>• How can the linkages between the fishing, aquaculture and seafood sectors with the Blue Economy innovation community be improved and accelerated?</td>
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<td>• What investment opportunities would these innovations create?</td>
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<tr>
<td><strong>Chairs/Moderators</strong></td>
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<tr>
<td>• Donna Lanzetta, CEO, Manna Fish Farms *</td>
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<td>• Lori Kennedy, CEO, Louisbourg Seafoods *</td>
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<td><strong>Speakers/Panel</strong></td>
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<tr>
<td>• Karl Almås, Chairman, Aquatech Cluster, Norwegian Center of Expertise</td>
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<td>• TBD, Director of Research, Planet Tracker</td>
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<td>• John Goodlad, Chairman, Fisheries Innovation Scotland</td>
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<td>• John Molina, President, Pacific6</td>
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<tr>
<td>• Edouard Le Bart, Southern European Regional Director, Marine Stewardship Council (MSC)</td>
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</table>
### Ocean EIA: Solutions, Best Practices and Collaboration for Assessing Threat, Risk and Impacts to High Seas Biodiversity

**Framing questions**
- What are the best practices for assessing threat and risk and undertaking environmental impact assessments (EIAs) for high seas biodiversity?
- How can these help inform and ensure that the legally binding BBNJ agreement includes practical, science-based solutions that work with industry and other stakeholders to understand and address priority impacts?
- Is there value in having an international platform or forum for the practitioners and clients of high seas EIAs to advance and improve this emerging field, in support of the BBNJ treaty?

**Chair/Moderator**
- TBD

**Speakers/Panel**
- Mikael Kamp Sørensen, Head, Ecology and Environment Department, DHI
- Greg Fisk, Business Development Director, BMT
- Marcel Rozemeijer, Researcher Blue Growth, Wageningen Marine Research, Wageningen University and Research *

### Biofouling, Invasive Species and the GEF-UNDP-IMO GloFouling Partnerships Project: Guidance, Standards and Regulators

**Framing questions**
- What is the GEF-UNDP-IMO GloFouling Partnerships Project?
- How is the issue of invasive aquatic species being addressed through guidance, standards and regulators that are affecting a range of ocean industry activities?
- What are the innovation needs and investment opportunities in relation to addressing the global, multi-industry challenge of biofouling and the introduction of invasive species?

**Chair/Moderator**
- TBD

**Speakers/Panel**
- Lilia Khodjet El Khil, Project Technical Manager, GEF-UNDP-IMO GloFouling Partnerships, International Maritime Organization (IMO)
- Theofanis Karayannis, Head of Marine Biosafety, International Maritime Organization (IMO)
- Mikael Kamp Sørensen, Head, Ecology and Environment Department, DHI
- Boud van Rompay, CEO, Hydrex
### Social License and the Blue Economy: Roles, Responsibilities and Opportunities for Innovation

**Framing questions**
- What are the roles and responsibilities of businesses, sectors, cross-sectoral organizations and governments in relation to social license in the Blue Economy?
- How can the Ocean Business Community work together to address social license issues?
- Who should be investing in the development of innovative engagement practices between business, sectors, governments and communities (or stakeholders) to enhance the social license of the Blue Economy?

**Chairs/Moderators**
- Judith van Leeuwen, Environmental Policy Group, Department of Social Sciences, Wageningen University
- Michelle Voyer, Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong

**Panel**
- **Ports**: David Bolduc, Executive Director, Green Marine
- **Oil and Gas**: Clement Lavigne, Deputy to Senior VP HSE, Exploration and Production, Total *
- **Deep Sea Mining**: TBD
- **Shipping**: TBD
- **Aquaculture**: Donna Lanzetta, CEO, Manna Fish Farms *
- **Ocean Energy**: Bill Staby, CEO, Resolute Marine Energy *

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### Investing in People:
Young Ocean Professionals, Sustainable Development and Jobs in the Blue Economy

**Framing questions**
- Where are the job and career opportunities for Young Ocean Professionals in the Blue Economy, i.e. are companies looking for people with an interest and experience in sustainable development?
- What educational, training and professional development opportunities are critical for addressing the growing ocean sustainable development challenges facing the Ocean Business Community?
- What are the professional development needs of the investment community regarding the Blue Economy and ocean sustainable development, and how can these be met?

**Chair/Moderator**
- TBD

**Speakers/Panel**
- Cleopatra Doumbia-Henry, President, World Maritime University
- Gail Scowcroft, Associate Director, Inner Space Center, University of Rhode Island
- Marc Le Menestrel, Visiting Professor, Corporate Governance and Sustainability, INSEAD Singapore
- Jennifer Fox, Consultant, Aquatera
- Francois Bailet, Senior Legal Officer, U.N. Division for Ocean Affairs and the Law of the Sea (DOALOS)
Note that the SOS 2019 Draft Program is subject to changes. Speakers marked with * are pending confirmation.