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Intergovernmental  
Oceanographic  
Commission



2021  
2030 United Nations Decade  
of Ocean Science  
for Sustainable Development



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TROPICAL AMERICAS AND THE CARIBBEAN REGION

REGIÓN TROPICAL DE LAS AMÉRICAS Y EL CARIBE

RÉGION DE L'AMÉRIQUE TROPICALE ET DES CARAÏBES

# UN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT 2021–2030 TROPICAL AMERICAS AND THE CARIBBEAN REGION TECHNICAL REVIEW COMMITTEE MEETING

*One Planet, One Ocean / Un Planeta, Un Océano / Une planète, un océan*

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# AGENDA

- Opening – Setting the Scene
  - Secretariat briefing/objectives
  - Report on the outcomes of the Kick-Off Conference
- Consultancy Report and Draft Proposals
  - Introduction to Session
  - Knowledge and Solutions
  - Essential Infrastructure
  - Foundational
  - Open Discussion
- Way Forward
  - Decade Call For Action – Regional Documents for Endorsement

# REFERENCE DOCUMENTS

- Desk Research and Assessment
- Draft Proposals

<https://docs.google.com/document/d/1le9JZeXkMtiPs-nXLe7LySVsDTJj8VFo/edit>

- Kick-Off Conference Executive Summary

# DESK RESEARCH AND ASSESSMENT

<b>A clean ocean</b>	<ul style="list-style-type: none"> <li>• Harmonization of regional governance and overcoming geopolitical and economic diversity of the TAC Region</li> <li>• Identification of opportunities, gaps, challenges, barriers and favourable conditions to support co-design, co-production and co-delivery actions</li> <li>• Addressing the most challenging ocean pollutants</li> <li>• Wastewater treatment</li> <li>• Nutrient and agriculture runoff (and impact and causality) on Sargassum to be further studied</li> <li>• Policy design on marine litter and macroplastics to be furthered</li> <li>• Need to integrate a transdisciplinary component that actually addresses the social and economic problems that exist behind the issue.</li> </ul>
<b>A healthy and resilient ocean</b>	<ul style="list-style-type: none"> <li>• To sustainably manage, protect or restore marine and coastal ecosystems</li> <li>• To fill priority knowledge gaps of ecosystems and their reactions to multiple stressors</li> <li>• To develop tools to implement management frameworks that build resilience, recognize thresholds, and avoid ecological tipping points</li> </ul>
<b>A predicted ocean</b>	<ul style="list-style-type: none"> <li>• Create the infrastructure (technical, logistical, governance and management) to deliver outcomes</li> <li>• An ensemble of regional interdisciplinary models that are accessible to all and nested to provide high-resolution products for coastal states and regions</li> <li>• A sustainable region-wide network of ocean and coastal observations for (i) model support, (ii) early warning systems, (iii) real-time products for use by the ocean and coastal interests and activities</li> <li>• A data management system</li> <li>• A product development, creation, delivery, and display system</li> <li>• Capacity building to create, sustain and utilize the above</li> <li>• A Governance and Management system</li> </ul>
<b>A safe ocean</b>	<ul style="list-style-type: none"> <li>• A Multi-Hazard Early Warning System (MHEWS) addressing priority Hazards</li> <li>• Address all MHEWS components</li> <li>• Address Improving Data Collection and Sharing, Capacity Building, Governance, Inter-institutional Cooperation</li> <li>• Regional (highest priority) AND national and local Governance</li> </ul>
<b>A sustainably harvested and productive ocean</b>	<ul style="list-style-type: none"> <li>• To create a better understanding of the interactions and interdependencies of the environmental conditions and processes, the use of resources and the economy</li> <li>• Harmonization of regional governance and overcoming geopolitical and economic diversity of the TAC Region</li> <li>• Development and implementation of a transboundary, multidisciplinary, and cross-sectoral research approach</li> <li>• Identification of opportunities, challenges, barriers, and favourable conditions to support co-design, co-production and co-delivery, building up a healthy and resilient ocean where marine ecosystems are mapped and protected</li> <li>• From the survey during the webinar on WGS, the key ocean-related research priorities identified for a regional program in the WTA are aspects focusing on environmental, health and biodiversity, climate change adaptation and mitigation, supporting blue economy initiatives, improving food security and nutrition, and gender and reducing social inequalities</li> </ul>
<b>A transparent and accessible ocean</b>	<ul style="list-style-type: none"> <li>• Better understanding of the users of the observations and provide evidence for the impacts of ocean observation and the need to sustain the observation system</li> <li>• Better education as to why the ocean observing is useful to The Decade outcomes and SDGs and promote strong regional alliances</li> <li>• Open access to data, information, and technologies</li> <li>• Information on access system for data sharing and interoperability and available to the public in 12- 24 months and some in real-time for specific products, and services tailored to different stakeholder needs</li> <li>• Enhance Members States capacity on data and information management</li> <li>• Standardization and best practices for coordinated data collection, management</li> <li>• Multidisciplinary partnerships to integrate earth system/social sciences, and cross-sectoral participation to mobilize constituencies for national policy and community decision-making processes</li> </ul>
<b>Capacity Development, Ocean Literacy and Best Practices</b>	<ul style="list-style-type: none"> <li>• Increase scientific production and knowledge about the oceans</li> <li>• To offer products and services to all stakeholders by delivering tailored information and content</li> <li>• Enhance access to existing and new technology and equipment</li> <li>• Accelerate and deep-sea training</li> <li>• Strengthen collaboration and networking</li> <li>• Identify gaps in knowledge, data collection and categorization patterns to implement best practices</li> </ul>

<b>A clean ocean</b>	<ul style="list-style-type: none"> <li>• Harmonized Governance</li> <li>• Data and information sharing</li> <li>• Capacity building</li> </ul>	<ul style="list-style-type: none"> <li>• Identify primary sources, pathways and flows/spreading of pollution and creation of a global pollutants database</li> <li>• Demonstrate measurable impacts of pollution and combined effects of climate change and other stressors on ecosystems/organisms and human health</li> <li>• Define what clean means</li> <li>• Determine ways of eliminating, reducing, or mitigating effects of pollution</li> <li>• Foster interdisciplinarity in support of positive change including facilitating collaboration with social sciences</li> <li>• Development of a comprehensive map (major stress) of the ocean</li> <li>• Engage with youth and early career professionals</li> </ul>
<b>A healthy and resilient ocean</b>	<ul style="list-style-type: none"> <li>• Knowledge gaps regarding ecosystem-based approaches to wastewater treatment from coastal communities, sustainable funding mechanisms for sanitation in coastal communities, the location and management of marine protected areas, effective funding mechanisms for long-term protection of ecosystems and restoration efforts, and knowledge to underpin blue carbon initiatives</li> <li>• Understand and best marine pollution, creating ways to protect and restore ecosystems and biodiversity.</li> <li>• Increase community resilience to ocean hazards.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand the structure and function of the ecosystem, as well as interdependencies between ecosystems (particularly for the messaging) and other related to maintain or restore a healthy and resilient ocean</li> <li>• Understand the impacts on ecosystems of human activities including area, synergistic, and cumulative impacts of climate change, the growing Blue Economy and associated economic opportunities including greenwashing. There is also a need to better understand multi-stressor / multi-actor environments including under climate change scenarios</li> <li>• Promote ocean literacy and science-policy dialogue including expanding use of citizen and user-oriented (e.g. tourism operators, fisheries data collection, and use of local and traditional knowledge and practices)</li> <li>• To establish integrated and sustainable ocean management in the region</li> <li>• Identifying critical ecosystems and discussing the establishment of marine protected areas</li> <li>• Promote and discuss the drafting of sustainable ocean plans in the region</li> <li>• Increase ocean-based measurable impact (e.g. officers and formal discussions in the region)</li> </ul>
<b>A predicted ocean</b>	<ul style="list-style-type: none"> <li>• Capacity building and training</li> <li>• Governance and Management structure</li> <li>• Information sharing</li> <li>• Cooperation in 642s</li> </ul>	<ul style="list-style-type: none"> <li>• Develop an ensemble of regional interdisciplinary models accessible to all and nested to provide high resolution products for coastal states and regions</li> <li>• Support a sustainable region-wide network of ocean and coastal observations for model support, early warning systems and real time products for use by ocean and coastal interests and activities</li> <li>• Engage to application, and user services</li> <li>• Include Demonstration projects collecting distributed data sets over full region</li> <li>• Use ODS/ 2030 Strategy</li> <li>• Critical to create a 'pull' from regional agencies, government, economic interests to bring resources for ocean prediction into the region and implement them locally</li> <li>• Need a complete panel (and ongoing) inventory of possible observations and models</li> <li>• Data management system (Intake, OAVG, active, distribution) -&gt; Transparent and Accessible</li> <li>• Product development, creation, delivery, display system</li> <li>• Capacity building to create, sustain and utilize Steps 1 - 6</li> <li>• Governance and Management</li> </ul>
<b>A safe ocean</b>	<ul style="list-style-type: none"> <li>• Capacity building and training</li> <li>• Governance and Management structure</li> <li>• Information sharing</li> <li>• Cooperation in 642s</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct a regional and multi-modal Early Warning System (EWS) addressing priority hazards</li> <li>• Build connections to Predicted Ocean and Ocean Ocean activities</li> <li>• Address all MHEWS components</li> <li>• Address Improving Data Collection and Sharing, Capacity Building, Governance, Inter-institutional Cooperation</li> <li>• Regional (highest priority) AND national and/or local Governance</li> </ul>
<b>A sustainably harvested and productive ocean</b>	<ul style="list-style-type: none"> <li>• Harmonized Governance</li> <li>• Data and information sharing</li> <li>• Capacity building</li> </ul>	<ul style="list-style-type: none"> <li>• Increase knowledge on ecosystem function and sustainability at the ecosystem level</li> <li>• Increase knowledge on impacts of the Blue Economy activities and climate variability change on fisheries, resource and ocean-based ecosystems health and sustainability, as well as understanding of the trade-offs between use of the ocean and its resources</li> <li>• Understand the future of food production from the ocean</li> <li>• Foster interdisciplinarity science and inclusion of traditional and/or local knowledge</li> </ul>
<b>A transparent and accessible ocean</b>	<ul style="list-style-type: none"> <li>• Capacity building and training</li> <li>• Governance and Management structure</li> <li>• Information sharing</li> <li>• Cooperation</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a sustainable region-wide network of ocean and coastal observations, based on identified cooperation arrangements (WTO-IOC)</li> <li>• Data management system (Intake, OAVG, active, distribution) -&gt; Transparent and Accessible</li> <li>• Product development, creation, delivery, display system</li> <li>• Capacity building to create, sustain and utilize Steps 1 - 6</li> <li>• Governance and Management</li> </ul>
<b>Capacity Development, Ocean Literacy and Best Practices</b>	<ul style="list-style-type: none"> <li>• Funding and investments in ocean-related activities</li> <li>• Access to communities of practice</li> <li>• Increase awareness, ocean literacy and public outreach</li> <li>• Establishing an effective coordination and communication mechanism between the regional sub-commission</li> <li>• Sharing of information on existing ocean research priorities among government and other organizations</li> </ul>	<ul style="list-style-type: none"> <li>• Organize workshops and webinars aiming to standardize ocean knowledge in the region</li> <li>• Identifying best practices for data collection, data usage and data integration/organization, to standardize local, national, and regional data</li> <li>• Organize and provide open access courses. The courses must be multilingual (designed for children, young people, indigenous people, and other vulnerable groups) and available in local cultures in the region.</li> <li>• Include a tab on the IOCAHE website with an inventory of programs and initiatives related to the Decade and that could be helpful to face regional challenges</li> <li>• Promoting ocean literacy at the regional level.</li> </ul>

# KICK-OFF CONFERENCE EXECUTIVE SUMMARY



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The UN Decade of Ocean Science for Sustainable  
Development 2021-2030:  
Tropical Americas and Caribbean Region

Regional Kick-off Conference  
Executive Summary



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