



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Oceanographic
Commission



United Nations
Climate Change

(devoted to Biliana Cicin-Sain)

The Science We Need for Strengthening Action on Adaptation and Mitigation

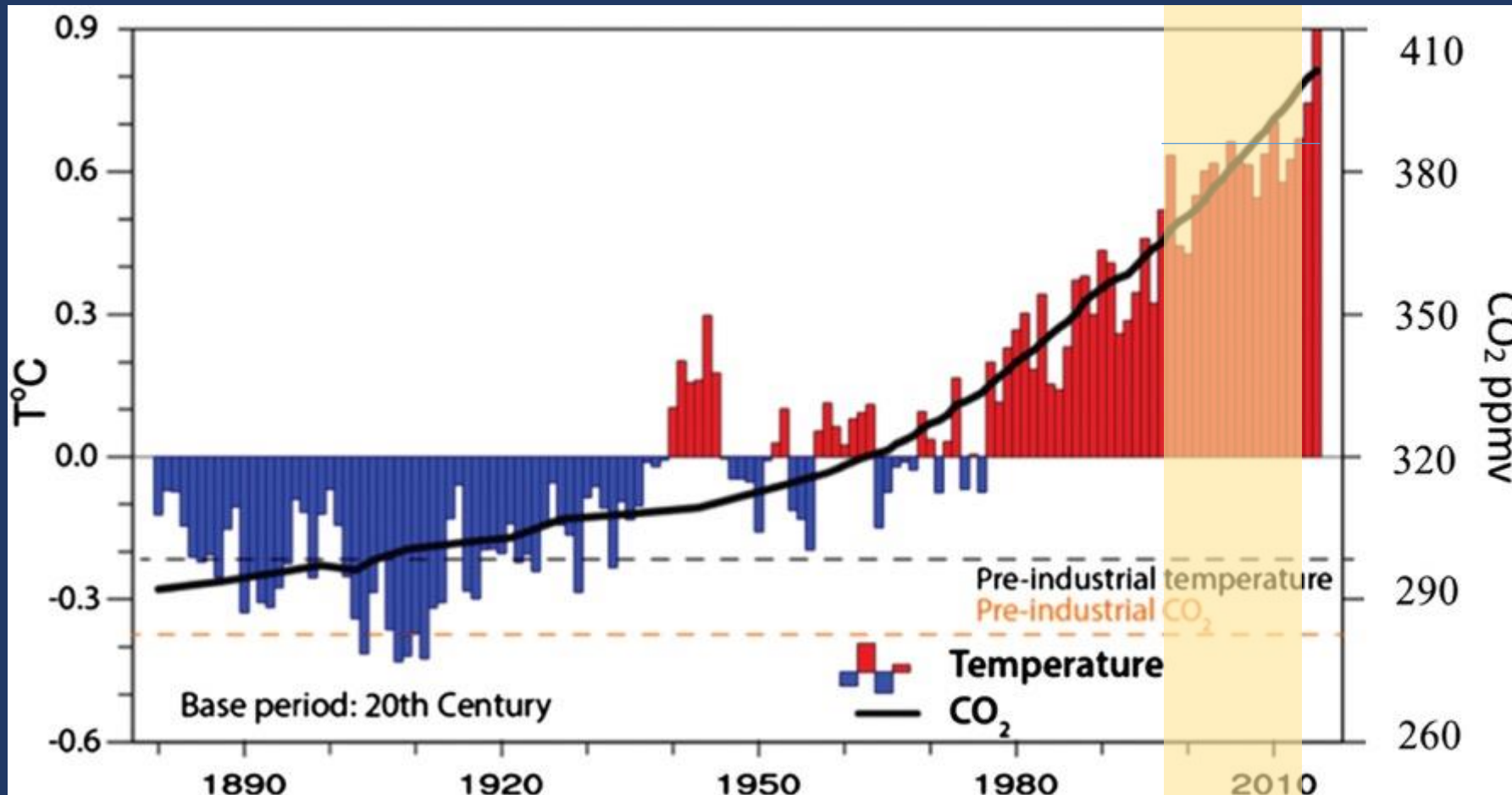
Dr Vladimir Ryabinin
Executive Secretary, IOC of UNESCO

**UNFCCC Ocean and Climate Change Dialogue to consider
how to strengthen adaptation and mitigation action:**

2 December 2020



Global Surface Warming Slowdown Before Paris Agreement of 2015



"global warming hiatus" -> "global surface warming slowdown"

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Yan et al., 2016, updated from Trenberth and Fasullo, 2013



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Milestones in Setting Agendas



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PARIS AGREEMENT

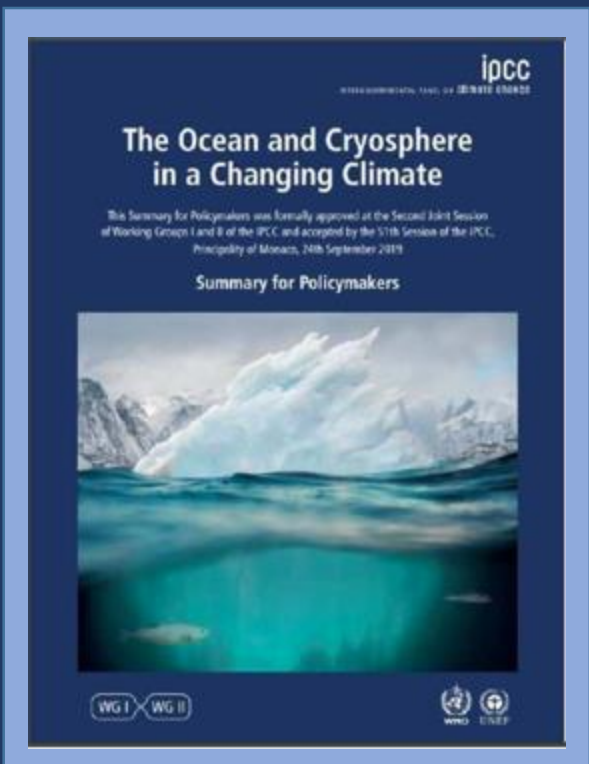
UNITED NATIONS
2015

Noting the importance of ensuring the integrity of all ecosystems, including oceans, ...



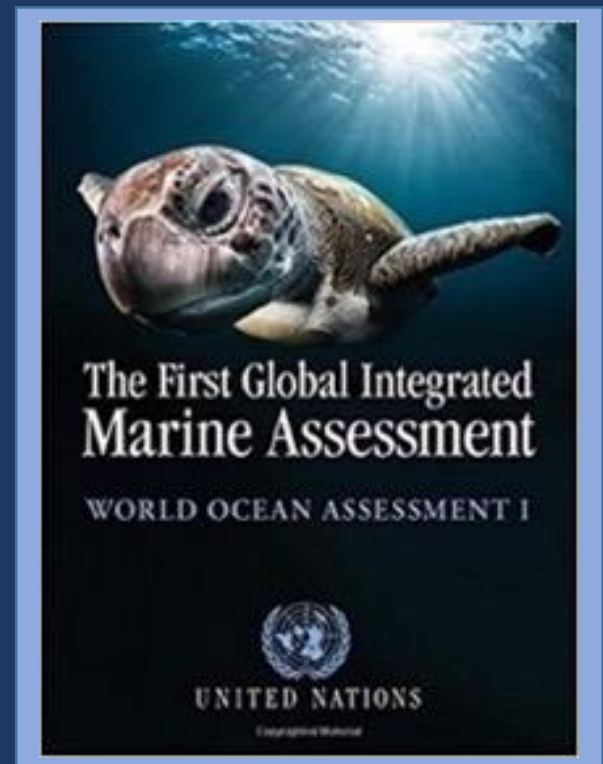
The cryosphere is shrinking, the sea level is rising, the ecosystems are transformed, SROCC: 2019

Inspiring COP25 to establish this Dialogue



Humankind is running out of time to start managing the ocean sustainably, WOA-I: 2016

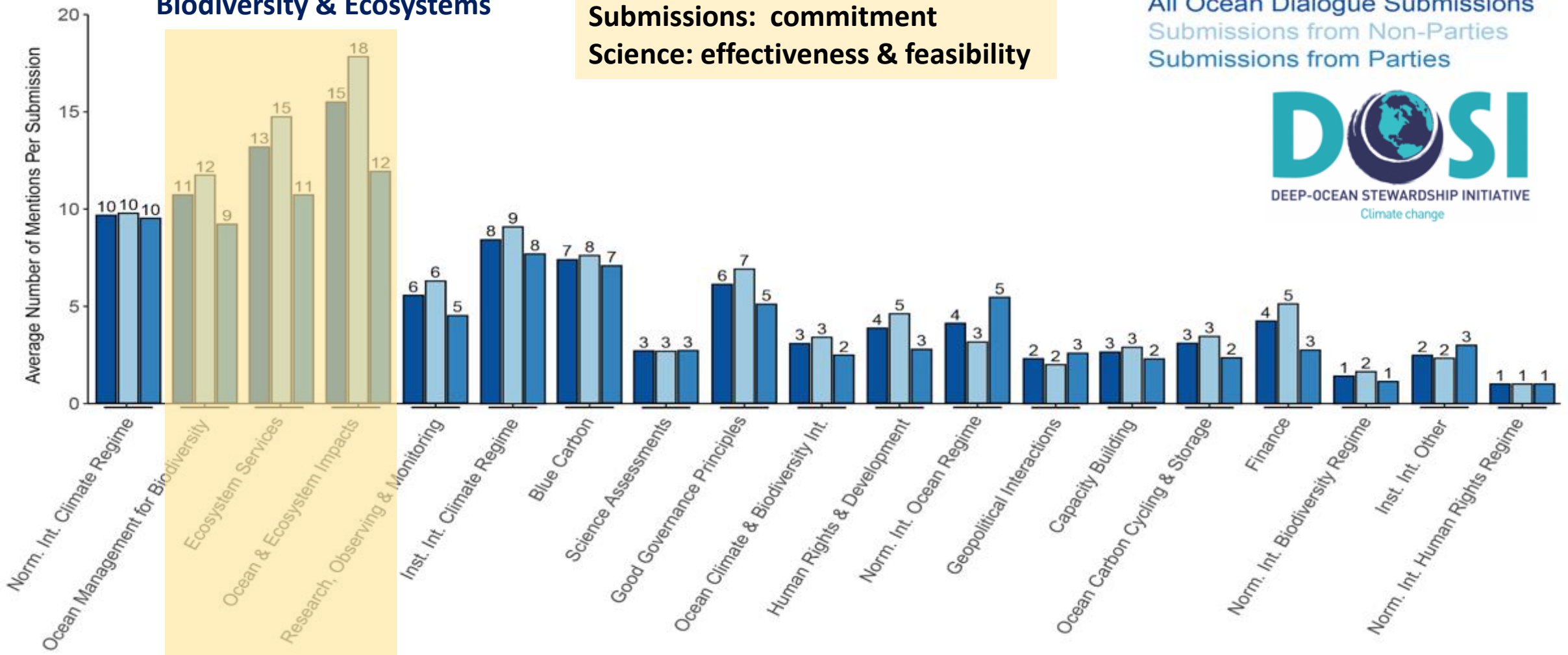
Inspiring UN Ocean Conferences and more



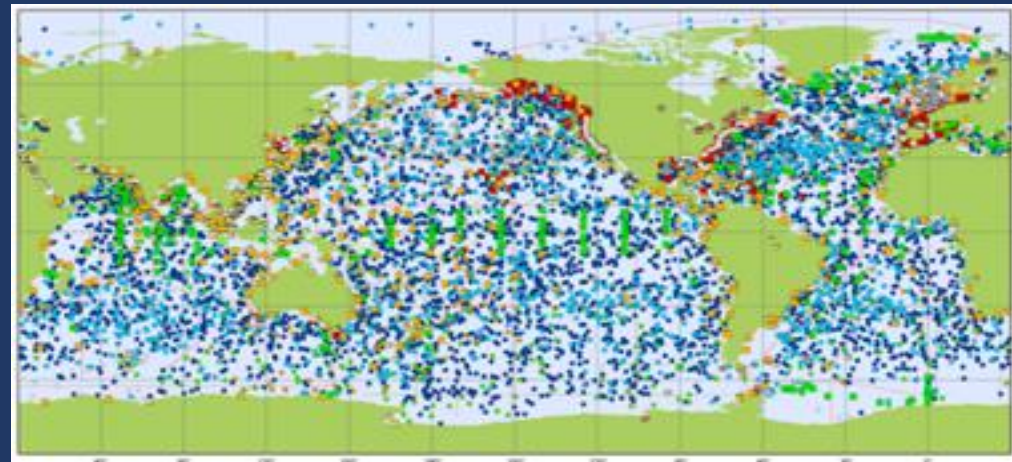
Biodiversity & Ecosystems

Submissions: commitment
Science: effectiveness & feasibility

All Ocean Dialogue Submissions
Submissions from Non-Parties
Submissions from Parties



Observing, Understanding, Predicting

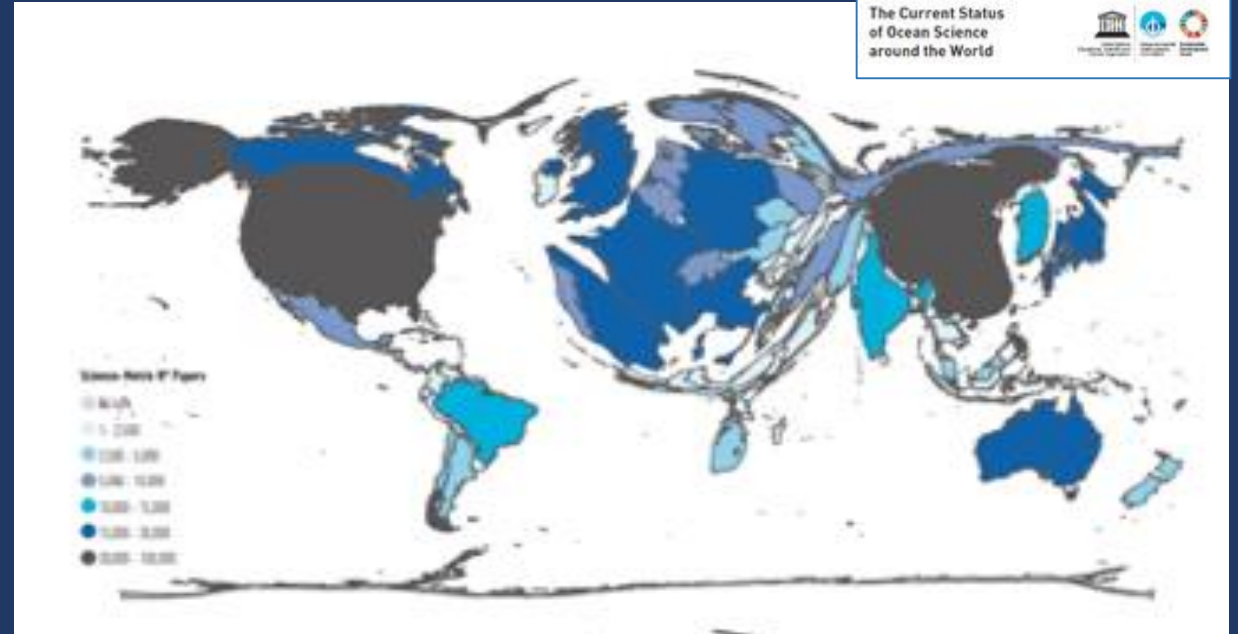
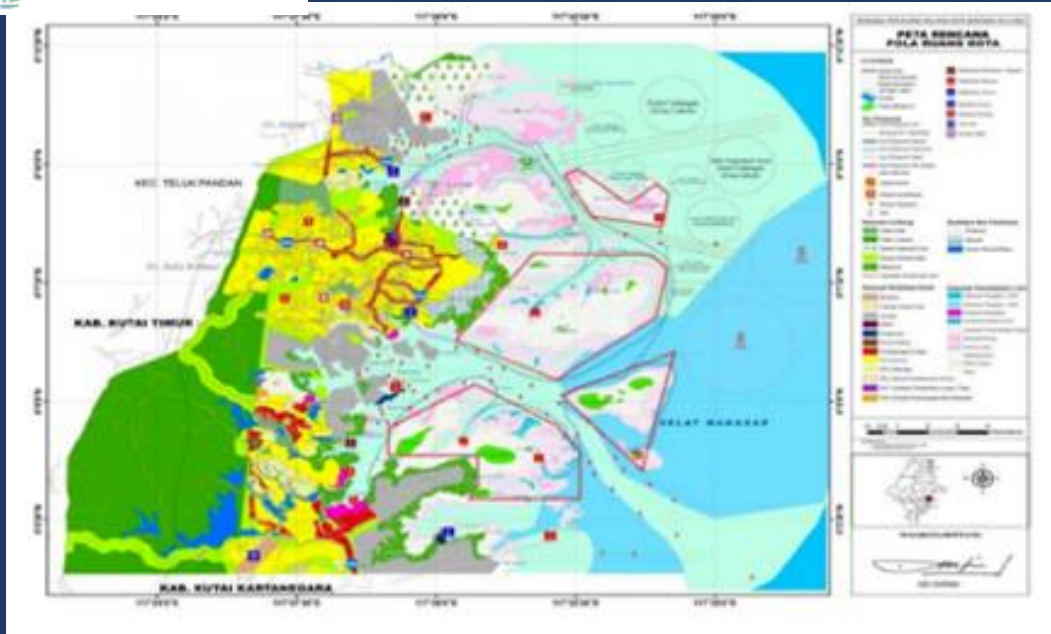


Integrated Ocean Management



HIGH LEVEL PANEL for
A SUSTAINABLE
OCEAN ECONOMY

Capacity in Ocean Sciences



Key Ocean Management Domains



Coastal zone
management
and adaptation



Marine Spatial
Planning/
Sustainable
ocean economy



BBNJ,
Marine
Protected
Areas



Management
of fisheries
and aquaculture



Adaptation to
and mitigation
of climate change,
NDCs



Development
of national
ocean policies



Development of
national R&D
strategies



Regional and
national capacity
development
planning



Early
warning
systems



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Co-design of Science for **A** and **M**

Adaptation

Mitigation



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Current science is mature for problems diagnostic and their explanation. However, we need to strengthen science for offering solutions and stimulating effective action.

- Science:** Physical climate (temperature, storms, sea level, droughts and floods, ...); biogeochemistry (**C**, pH, O₂,...); biology/ecology; social sciences, economics,...
- Impact on:** Society, economy, climate, biodiversity
- Avenues:** Knowledge gap analysis, observations & data, **CD**/Transfer of Marine Technology, ocean and climate literacy, experimentation, analysis, modelling and prediction, continuous integration of knowledge
- Principles:** Transparency, co-design, **increasing objectivity based on impartial data**
- Stakeholders:** Parties, policy and decision makers, science communities, private sector, engaged partners, citizens...



GENERAL ASSEMBLY OF THE UNITED NATIONS

2016-2017













2018-2019



2019-2020



OCEAN DECADE CHALLENGES

	 Pollution	M
A	 Ecosystems	M
A	 Food from the Ocean	M
A	 Sustainable Ocean Economy	M
	 Ocean-climate nexus	A M
A	 Ocean-related risks	
A	 Ocean observing system	M
A	 Ocean digital representation	M
A	 Capacity development	M
A	 Behaviour change	M

2030 AGENDA & REGIONAL
AND GLOBAL POLICY
FRAMEWORKS

↕
DECADE OUTCOMES

"THE OCEAN
WE WANT"

↕



OCEAN DECADE CHALLENGES

The most immediate and pressing needs of the Decade. Challenges may evolve throughout the Decade and new Challenges will be added. Each Challenge contributes to one or more Decade outcomes.



DECADE OBJECTIVES

The steps in the process from the ocean we have to the ocean we want. Objectives are relevant to all Challenges. Prioritisation and translation of objectives into Actions will vary depending on context.



DECADE ACTIONS

The tangible initiatives and endeavours that will be implemented by a wide range of Decade stakeholders to fulfil the objectives and thus achieve the Challenges.

1st Call for

Action:

15 October 2020 –

15 January 2021

Continuing the work on the road to Glasgow and beyond



Continuous co-design of
the science we need for
ocean dimensions of **A**
and **M**

Global Stakeholder Forum 2021
Ocean Decade Alliance

Critical checkpoint on progress
in engaging Parties and making
ocean-related NDCs more and
more efficient for **A** and **M**

Friends of Ocean and Climate, ...