unesco
Intergovernmental Oceanographic Commission

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

THE UN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT

2021-2030

WESTERN TROPICAL ATLANTIC

TROPICAL AMERICAS A HEALTHY AND RESILIENT OCEAN CO-DESIGN WORKSHOP

"A HEALTHY AND RESILIENT OCEAN WHERE MARINE ECOSYSTEMS ARE MAPPED AND PROTECTED"

WTA - TECHNICAL WORKSHOPS SERIES
Report 2021 – 05

@IocaribeOcean

WESTERN TROPICAL ATLANTIC REGION

REGION ATLANTICO TROPICAL OCCIDENTAL

REGION ATLANTIQUE TROPICALE OCCIDENTALE

TROPICAL AMERICAS A HEALTHY AND RESILIENT OCEAN CO-DESIGN WORKSHOP

"A HEALTHY AND RESILIENT OCEAN WHERE MARINE ECOSYSTEMS ARE MAPPED AND PROTECTED"

WTA TECHNICAL WORKSHOPS SERIES

REPORT 2021 - 05

English only

This document presents the summary results of the technical workshop series convened in accordance with the Western Tropical Atlantic Action Plan for the UN Decade of Ocean Science for Sustainable Development 2021-2030 (The Ocean Decade), for the seven societal outcomes, held during the period of July-October 2021, in accordance with the Regional Western Tropical Atlantic Planning Group Action Plan. The results of this regional session will be consolidated as a discussion paper by the co-conveners of the regional session, which can contribute to the Western Tropical Atlantic Action Plan including the Eastern Tropical Pacific.

For bibliographic purposes this document should be cited as follows:

Western Tropical Atlantic Technical Workshop Series Report 2021 – 05 as a contribution to the UN Decade of Ocean Science for Sustainable Development, Online meeting, 9 September, 2021

LIST OF CONTENT

THE UN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT 2021-2030
WESTERN TROPICAL ATLANTIC

Tropical Americas A Healthy and Resilient Ocean Co-Design Workshop

A healthy and resilient ocean where marine ecosystems are mapped and protected

WTA - TECHNICAL WORKSHOPS SERIES
Report 2021 – 05

Hosted by IOC of UNESCO Sub commission for the Caribbean and Adjacent Regions-IOCARIBE as regional coordinating body for The Ocean Decade.

Virtual Meeting, 9th September, 2021

1. BACKGROUND

This document presents the summary results of the technical workshop series convened in accordance with the Western Tropical Atlantic Action Plan for the UN Decade of Ocean Science for Sustainable Development 2021-2030 (The Ocean Decade), for the seven societal outcomes, to be held during the period of July-September 2021, in accordance with the Regional Western Tropical Atlantic Planning Group Action Plan.

Workshop repository with presentations and documents:

http://iocaribe.ioc-unesco.org/webinarseries/ahar

A list of programs and initiatives that are relevant as per Annex 4. The full list of UN Endorsed Programmes (28) and Contributions (33) can be accessed at **https://oceandecade.com/resource/166/Results-of-the-first-Call-for-Decade-Actio ns-No-012020).**

2. INTRODUCTION AND CONTEXT

As a preparation process for implementing the UN Decade of Ocean Science for Sustainable Development 2021-2030, a virtual meeting for the Western Tropical Atlantic was held on 09 September 2021. Over 109 participants, from 31 countries from the Tropical America region and around the globe, among students, researchers, academia, government, partner organizations, and international institutions, attended the online session. The Workshop focused on guiding the barriers and solutions needed to achieve the societal outcomes of the Ocean Decade, mainly on how to conquer a healthy and resilient ocean. During the event, some cross-cutting issues related to the challenge were discussed. The report focuses on the healthy and resilient ocean outcome. Agenda as per Annex 1. Statistics on the participants as per Annex 2.

As established in the Ocean Decade Implementation Plan[1] , communities of practice will convene around the Ocean Decade Challenges via stakeholder engagement mechanisms to translate them into relevant Ocean Decade Actions at the global, regional, national, and local scales.

Grand Challenge 2

Understand the effects of multiple stressors on ocean ecosystems and develop solutions to monitor, protect, manage and restore ecosystems and their biodiversity under changing environmental, social, and climate conditions.

Grand action

To sustainably manage, protect or restore marine and coastal ecosystems, priority knowledge gaps of ecosystems, and their reactions to multiple stressors, need to be filled. Such knowledge is essential to develop tools to implement management frameworks that build resilience, recognize thresholds, avoid ecological tipping points, and thus ensure ecosystem functioning and continued delivery of ecosystem services for the health and well-being of society and the planet as a whole.

3. PARTICIPANTS

The workshop recorded attendance of 125 registered participants, coming from local, national, regional, and global Meteo-Ocean specialists, ocean scientists, transdisciplinary researchers, producers of ocean data, products and services, policy makers, UN partners, business and industry, government representatives, NGOs and other key stakeholders from the regions involved in national and regional ocean and marine related matters. Annex 1.

[1] Ocean Decade Implementation Plan - January 2021 https://oceanexpert.org/downloadFile/47522

4. OUTCOMES AND FINDINGS

The aim of the workshop was to facilitate and contribute to identify 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.

5. PROGRAMME HIGHLIGHTS AND WAY FORWARD

Part 1. Overview of the Ocean Decade

As part of the overview of the Ocean Decade presented by Professor Elva Escobar from the Universidad Nacional Autonoma of Mexico and a Member of the UN Decade Advisory Board, a poll was launched to feel how familiar the public was regarding the Ocean decade (Figure 1.).

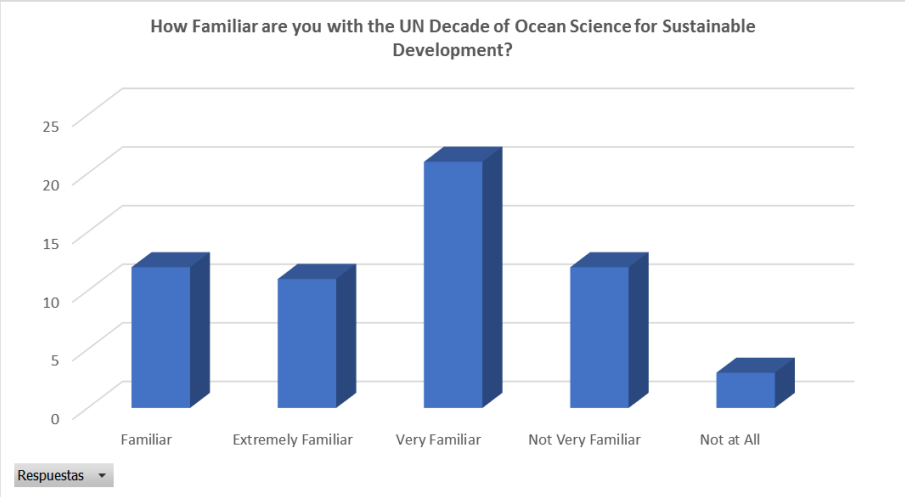


FIGURE 1. QUESTION 1 OF THE POLL FOCUSED ON THE KNOWLEDGE OF THE DECADE. 59 PARTICIPANTS ANSWERED THE POLL.

The results showed that 75% of the attending participants were at least familiar with the concept of the UN Decade. It is gratifying to see that 15 people who were not acquainted with the Decade attended and participated in the Workshop.

A Decade action video was also shown and can be accessed for review on the following link: https://www.youtube.com/watch?v=NKFhhwpsm-8

Part 2. State of the Ocean Health in the Western Tropical Atlantic

This session, moderated by Francisco Arias, Director General of the INVEMAR, and Member of the Ocean Decade Planning Group, counted on the experience and expertise of five panelists that shared their view on four critical issues of Ocean health and resilience: stressors and impacts that hinder a healthy ocean, the protection of the Ocean, blue carbon as an opportunity for ocean restoration and the science behind the needs for mapping marine ecosystems. After each presentation, a poll was launched. The results are shown after each resume and corresponding figure.

FIGURE 2. PANELIST LEADING PART 2 OF THE STATE OF THE OCEAN HEALTH IN THE WESTERN TROPICAL ATLANTIC

Stressors and impacts that hinder a healthy ocean

Christopher Corbin - Programme Officer, AMEP & CETA – UNEP

Coral reefs, mangroves, and seagrasses are being degraded by multiple global and local pressures and threats, including pollution from land- and marine-based sources (LBS), climate change, habitat degradation and overfishing. Underlying socioeconomic issues drive these threats and a pattern of short-term, sectoral, unsustainable, consumptive resource use. Agriculture is the most important anthropogenic source of excess nutrients in the Region's coastal waters. People's health, well-being, livelihoods, and key economic sectors are in jeopardy.

While we lack data, information and research, there is a need for urgent and coordinated action to prevent further loss or degradation of these habitats and resulting impacts on public health, infrastructure, livelihoods, and important economic sectors.

These gaps require targeted capacity building, implementing integrated ecosystem-based and nature-based solutions, prioritizing longer-term management outcomes, strengthening communication, public engagement and collaborative governance, and adopting stewardship approaches that recognize the value of natural ecosystems to socioeconomic development.

Actions

- Ratify and/or implement the Cartagena Convention and its Protocols and other regional and global agreements on coastal and marine ecosystems and pollution.
- Expand regional cooperation on marine issues, including state of marine environment assessments.
- Use standard monitoring and data collection methodologies to support regional efforts to analyze and report on the status of marine resources, threats, impacts, and effectiveness of response measures
- Strengthen national institutional frameworks, including via policy harmonization, to guide strategic, data-driven, long-term, and coordinated ecosystem-based management of marine and coastal resources.
- Invest in and scale up best management practices and technologies to protect marine habitats and to prevent, reduce, and control pollution.
- The Decade of Ocean Science of Ecosystem Restoration offers an opportunity to raise awareness and take action more importantly.

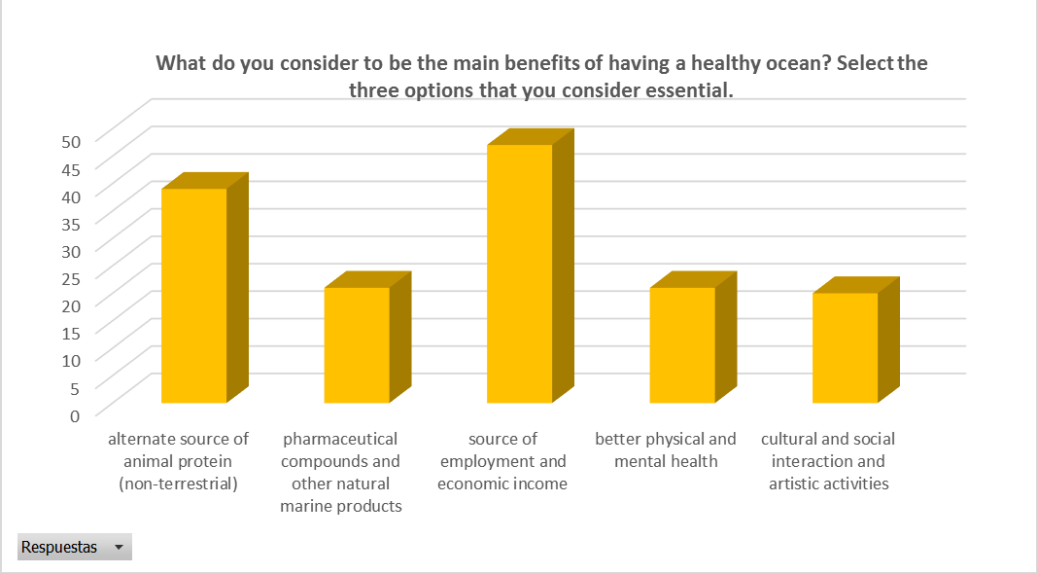


FIGURE 3. QUESTION 2 OF THE POLL FOCUSED ON THE CONSIDERATIONS OF THE HEALTHY OCEAN. 148 PARTICIPANTS ANSWERED THE POLL.

A Protected Ocean

Julia Miranda – IUCN – WCPA - Deputy President

Science is the most crucial issue to tackle the Ocean's problems. There is a lack of implementing natural solutions that may be found on Marine Protected Areas. The development of Natural Areas Protection Systems that include terrestrial and marine areas may be the best and most effective way to tackle known problems. As a IUCN initiative, the inclusion of a strategy of protecting 30% of land

and sea by 2030 is being triggered on the Post 2020 Global Biodiversity Framework of the Convention of Biological Diversity. This implementation by Parties will undoubtedly lead the way forward to reversing the effects of Climate Change or dealing with them in the best way possible to reverse biodiversity loss. Science has shown the interrelation of Climate change, biodiversity loss, and the planet's health, and thus, the protection of the Ocean is a way forward action.

The Colombian Protection Areas System can be an example of fulfilling the Aichi targets and counting on well-connected and effectively managed areas around the Caribbean. This Regional system holds protected areas and sustainably managed areas that complement each other within the different protection categories. The optimal localization of these key areas is also essential.

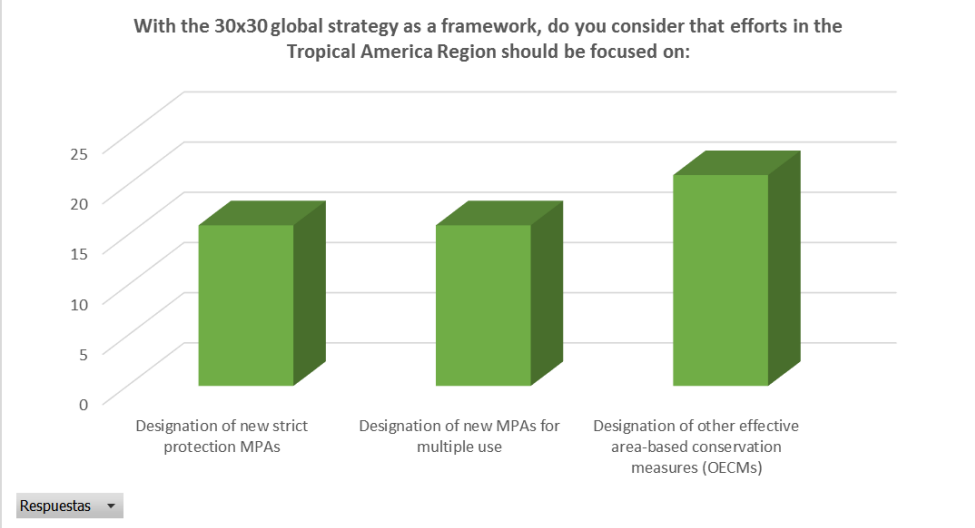


FIGURE 4. QUESTION 3 OF THE POLL FOCUSED ON THE CONSIDERATIONS OF A PROTECTED OCEAN. 53 PARTICIPANTS ANSWERED THE POLL.

Blue Carbon an Opportunity for Restoration

Maria Claudia Diazgranados – Blue Carbon Director – Conservation International

Blue carbon is stored in coastal and marine ecosystems, such as mangroves, tidal marshes, and seagrasses located in the planet's tropical Region. These systems sequester carbon from the atmosphere and maintain it for more than 100 years in the sediment. Their maintenance is critical to tackling the current global crises.

Human activities, such as coastal development, unregulated and illegal fishing, are deteriorating these ecosystems at an accelerated rate. Mangrove loss is generalized among the Tropical region, and concrete and urgent restoration and recovery activities are needed. The absence of previously existing mangrove coverage is the reason for continuous flooding in several areas, such as in Guyana.

Several examples of restoration measures can be found around the globe, with the active participation of IPLCs; one of them is the hydrological recovery of the coastal ecosystems in Mexico, with a notable change in 10 years. Monitoring is an essential part of these programs. A replicable model wordy to be replicated is the Project Vida Manglar in Colombia.

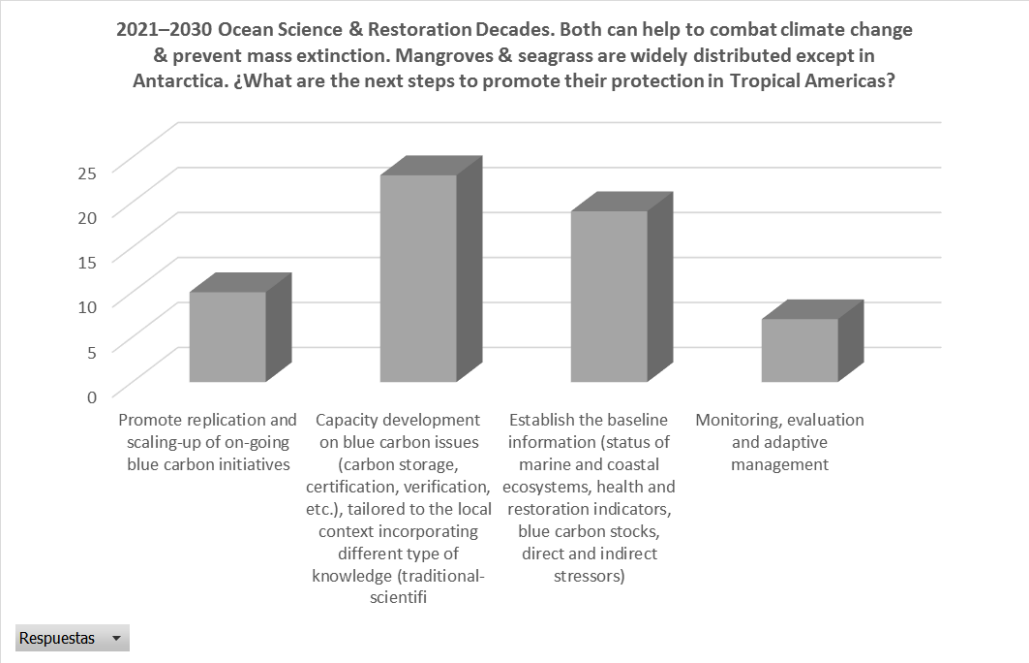


FIGURE 5. QUESTION 4 OF THE POLL FOCUSED ON THE CONSIDERATIONS ON RESTORATION. 59 PARTICIPANTS ANSWERED THE POLL.

Mapping Marine Ecosystems

Lucy Scott – OIH. Project Manager of the IOC Ocean InfoHub project

The IOC Ocean InfoHub Project (OIH) is a global initiative to improve access to marine and coastal data and information by developing interoperability between existing information systems. It is a three-year project that commenced in April 2020 funded by the Government of Flanders (Kingdom of Belgium).

The OIH will first work with IOC-associated online resources – including OceanExpert, OceanDocs/Aquadocs, the Ocean Best Practices System, the Ocean Biodiversity Information System (OBIS), the World Ocean Database (WOD) and Ocean Data Portal (ODP) – extended by partnerships with EurOcean, Marinetraining.eu, EMODNET, and other sources in the IOC ODIS Catalogue of Sources (ODIScat).

The Project will work with 6 initial data types: people and institutions/organizations, documents, spatial data/maps, training opportunities, vessels (research opportunities) and projects. It is working with three pilot regions: Africa, Latin America and the Caribbean and Pacific Small Island Developing States.

Through its contribution to theme (6) of the UN Decade, "A transparent ocean", this Ocean InfoHub will directly contribute to outcomes (ii), "comprehensive ocean observing system for all major basins", (iv), "data and information portal" and (vi), "capacity building and accelerated technology transfer, training and education, Ocean literacy".

The Project's development of a proof-of-concept architecture for distributed and interoperable data sharing is vital to supporting data exchange across basin-scale observing systems noted in (ii), "comprehensive ocean observing system for all major basins". Further, the Ocean InfoHub will substantially contribute to outcomes (iv), "data and information portal" and (vi), "capacity building and accelerated technology transfer, training and education, Ocean literacy" by empowering local, national, regional, and global actors to distribute capacity and information through harmonized portals, fully integrable into other solutions.

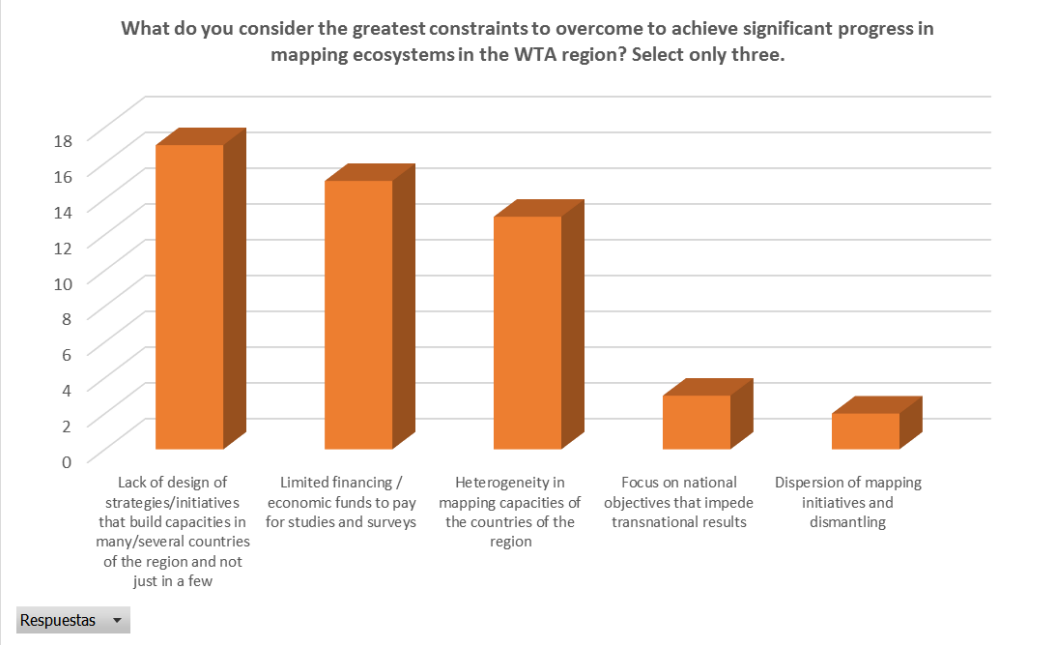


FIGURE 6. QUESTION 5 OF THE POLL FOCUSED ON THE CONSIDERATIONS OF MAPPING MARINE ECOSYSTEMS. 50 PARTICIPANTS ANSWERED THE POLL.

Part 3. Panel (Open) Discussion: Identifying knowledge gaps and priority areas.

After presenting the video on the Decade Challenge 2: *Protect and restore ecosystems and biodiversity*[2], Francisco A. Arias open the consultation process of the participants. Two questions were launched.

[2] Ocean Decade Challenge 2: Protect and restore ecosystems and biodiversity https://www.youtube.com/watch?v=-XTi0_267eM

KEY QUESTION – 1. What are the barriers that hinder progress towards achieving the Societal Outcomes of the Ocean Decade in the Region?[3]

- Lack of good education on the pollutants flowing into or dumped in the oceans
- Water quality issues to improve carbon sink approach using mangroves etc.
- Disconnection between the politicians, policy makers and the people
- Marine and coastal problems are disregarded by people who does not live directly by the sea
- Climate change is disproportionately affecting vulnerable and marginalized people.
- Lack of data on acidification
- Lack of consciousness of the importance of the Ocean
- MPA do not considered functional connectivity at a regional scale
- Investment in Ocean Science by federal governments
- The Ocean is so vast that it is simply too big
- Disperse information. Many different sources are sometimes not easily accessible.
- Communications and understanding the importance between policymakers
- Lack of capacity in under resourced countries
- Not using more natural carbon sinks like mangroves
- Lack of Circular Economy alternatives to process ocean waste
- Strict regulatory enforcements

[3] KQ1.https://jamboard.google.com/d/1mKU4gMULvt7euKJwsEl8OBjAzX-Rv45e8__iBbnVgYI/viewer?f=0
KQ2.https://jamboard.google.com/d/1ZipkrNJtRKeSXNytMNlZmWcsKBhocBTSg3mHIqvoEeQ/viewer?f=0

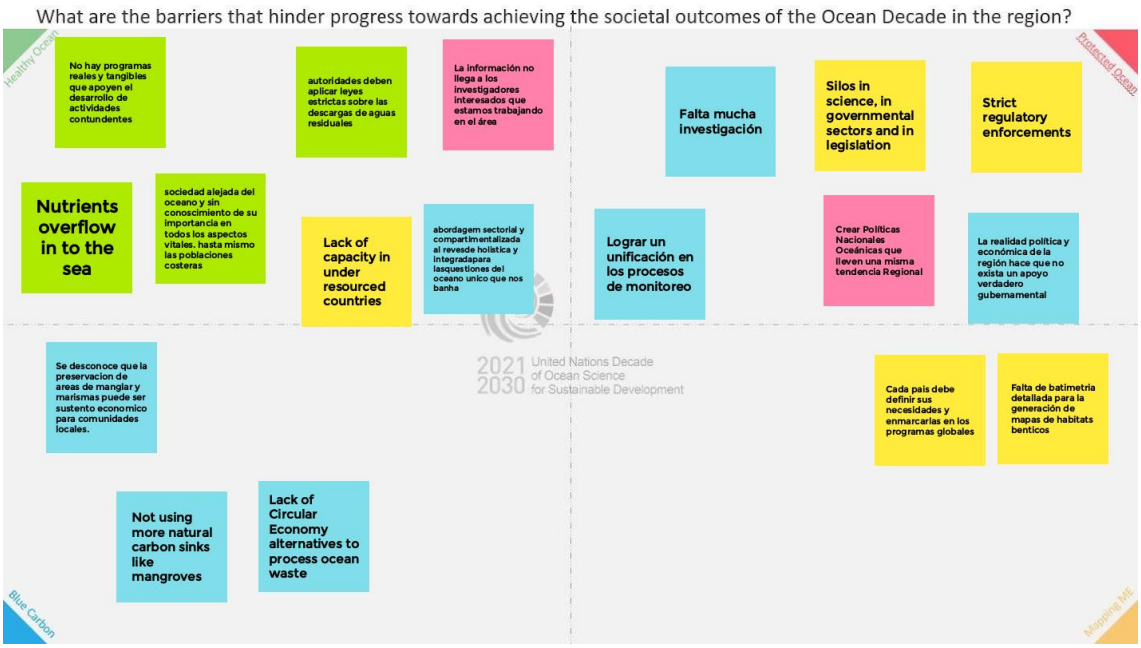


Figure 7. Barriers that hinder progress towards achieving the societal outcomes of the Ocean Science Decade in WTA

KEY QUESTION – 2. What transformative ocean science solutions will help overcome these barriers, and how could they be implemented throughout the Ocean Decade?

- Enforcing strict regulations on the effluents flowing into the Ocean along with education.
- Avoid parallel efforts of cooperation. Identify synergies among what already exists
- Monitoring programmes on ocean health
- Increased dialogue and a bottom-up approaches
- Optimize the participation of Atlantic countries in regional initiatives such as the All Atlantic Ocean Research Alliance and attached projects, being inclusive and egalitarian
- Education on emissions, pollutants and protection of natural carbon sinks like coral reefs and mangroves
- Best communication strategies with all communities of practice
- Central Information Systems for sharing of data amongst different data users.
- National research agenda with priorities for research
- Create open source portals
- The development of protected laws for the Ocean; like penalties for the ones who contaminate.
- Engage scientists in vital citizen science initiatives
- Open access to data to the public to put pressure and to take action on bad actors
- Marine ecosystem restoration to decarbonizing the current ocean-based industries
- Building a roadmap based on ToC
- Partnerships with ongoing programs in the region

Figure 8. Transformative ocean science solutions will help overcome these barriers

Part 4. Summary and Call to Action

Conclusions and Remarks

Taking into account that 75% of the attending participants were at least familiar with the concept of the UN Science Decade, as well as, their active participation in polls and open discussions, the main conclusions are:

1. Main benefits of having a healthy ocean are related to economic income including source of employments, and food safety. Bioprospecting, human health and cultural aspects are considering relevant for at least a quarter of the participants.
2. In order to increase the ocean resilient of the Tropical America Region the efforts on sustainable development will be focused not only in the designation a new marine protected areas based on conservation measures (OECMs) but also in creative and innovative nature-based solutions that added value to the biodiversity.
3. Innovative nature-based solutions must have a ripple effect on the health and resilience of the oceans, i.e., not only reverse biodiversity loss and mitigate climate change effects but also raise awareness for environmentally responsible economic investments.
4. Invaluable tropical marine ecosystems (like seagrasses and mangroves) linked with WTA needs in terms of local communities' benefits and global environmental incidence will be considering the successful blue carbon initiative in the region. For that, during Ocean Science Decade, efforts should be put in place on capacity development and gathering baseline information.
5. Status of marine and coastal ecosystems, restorations indicators, and stressors will be monitoring periodically. Priorities on Ocean Science Decade and Restoration Decade will be complementary and advance one and other on blue carbon ecosystems.
6. WTA needs are focus on spatial information improved and build digital inventory of relevant shallow and deep water Caribbean and Atlantic mapping data sets and conduct a data needs assessment. In that sense, the main priorities to consider in mapping marine ecosystems for WTA are focused on: i) reduce the gap of heterogeneity in capacities for mapping between countries including initiatives on almost all countries at region; ii) increase the funds to pay for scientific studies and inventories.
7. The main barriers to progress towards the achievement of the Decade of Oceans Social Outcomes in the WTA region are grouped into: a) lack of baseline scientific information on oceans and their biological diversity; b) low investment in ocean science; c) impending ocean literacy and capacity development needs, d) low cooperation among countries in the region, as well as with other regions of the world; e) sectoral vision over integrated approach, and f) disconnection between politicians, policy makers and local population.
8. The most relevant transformative ocean science solutions will help overcome these barriers are grouped on: a) mapping and technology transfer that provide open data and information availability and promote sharing data and experiences (Caribbean Marine Atlas, Ocean Info Hub, Ocean Best Practices); b) implementing financial strategies in order to follow different scientific studies; c) formulate clear methodologies and specific regional monitoring program including indicators and annual status report from the Region; d) enhance capacity programs based on WTA priorities and exchange experiences on marine and coastal management (Regional Training Centers of Ocean Teacher Global Academy in place will be help on it); e) attention on thematic topics like biodiversity, climate change, natural hazards and risks, pollution (land-base, microplastic) and monitoring specific variables about for ocean health and resilience throughout periodically data collection (at least in some of the countries at the Region are current in place); f) include the ocean topics in all education levels (primary and high school, universities programs); g) identify synergies among cooperation initiatives optimizing participation of different countries and research alliances; societal outcomes of Ocean Science Decade as a framework for national policies; h) increase political and societal dialogue a bottom up approach; i) develop a scientific communication strategies at local,

national and regional level; j) to take advantage of experiences on Marine Protected Areas and Blue Carbon recognized worldwide (marine protected area subsystem and Vida Manglar Blue Carbon Initiative) that could be replicated and scaling-up.

Way Forward

Francisco Arias presented the response of the regions to the Call for Decade Actions, an open invitation for partners from around the world to request endorsement for transformative Decade Actions that contribute to the Ocean Decade vision. The first of the two maps prepared by the COI secretariat (Figure 7) reflected the Region's *Project*, where the absence of projects endorsement is notable for the area.

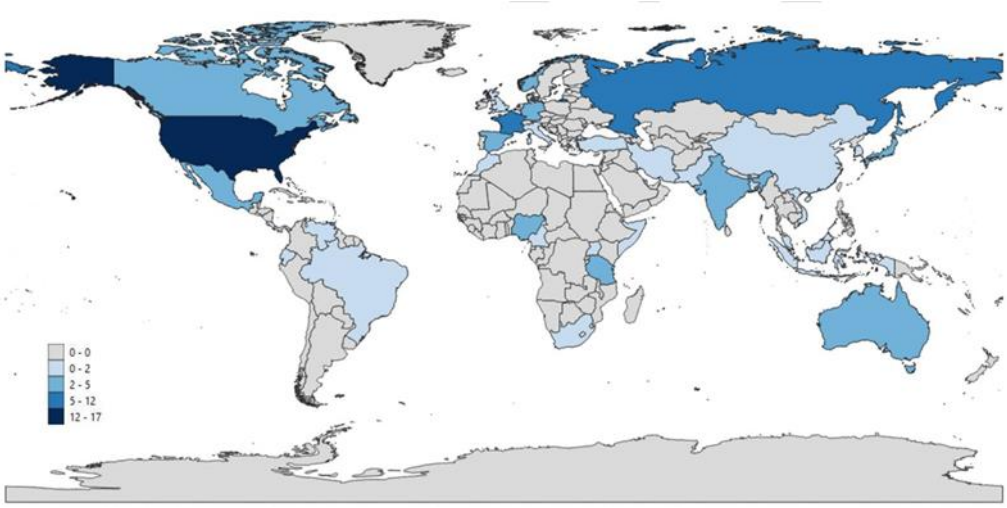


FIGURE 9. GEOGRAPHIC DISTRIBUTION OF LEAD INSTITUTIONS - ENDORSEMENT READY DECADE PROJECTS

The second map (Figure 8.) showed the lack of representation with the Ocean Decade Programmes' most ambitious actions. Within the Region, the lack of representation is even more significant. Programs are the most triggering actions in terms of the effects of the consecution of targets. This should be seen as encouragement and a motivator to attend the next Call of Action, increasing our participation and presence. It´s expected that the Co-design workshops allow the building of these new proposals.

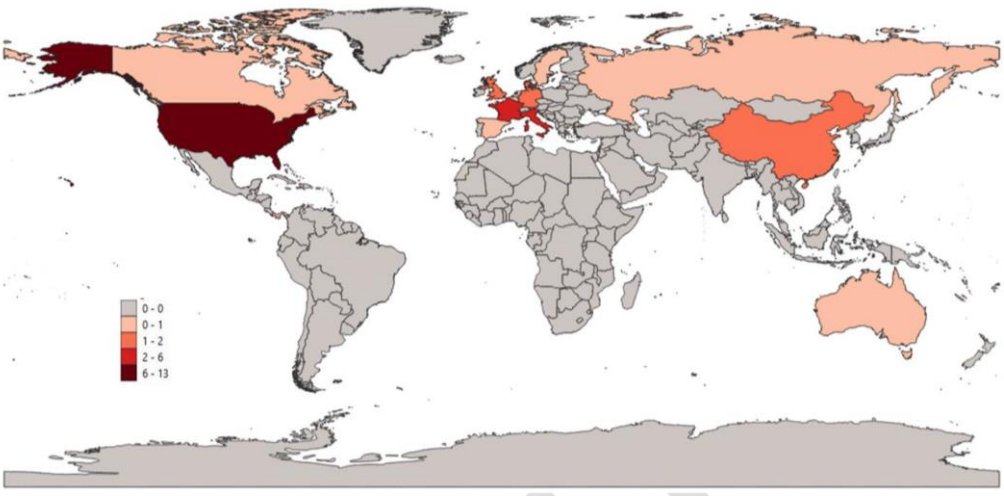


FIGURE 8. GEOGRAPHIC DISTRIBUTION OF LEAD INSTITUTIONS - ENDORSED DECADE PROGRAMMES

As an example, Francisco presented a Colombian nation experience as a way forward of successful follow-up experience on the Region joint actions. Something similar can be established for the Western Tropical Atlantic Region as a joint exercise as a mechanism of observtion of the Ocean. The RedCAM is a network of regional entities working together for more than 20 years to evaluate marine water and sediment quality standards. For the Region, a similar structure of Countries working together to generate scientific sound and robust comparable open data consolidated in a regional database. The structure will build on the existing regional efforts of IOCARIBE and CCPS to generate an environmental quality indicator comparable among nations.

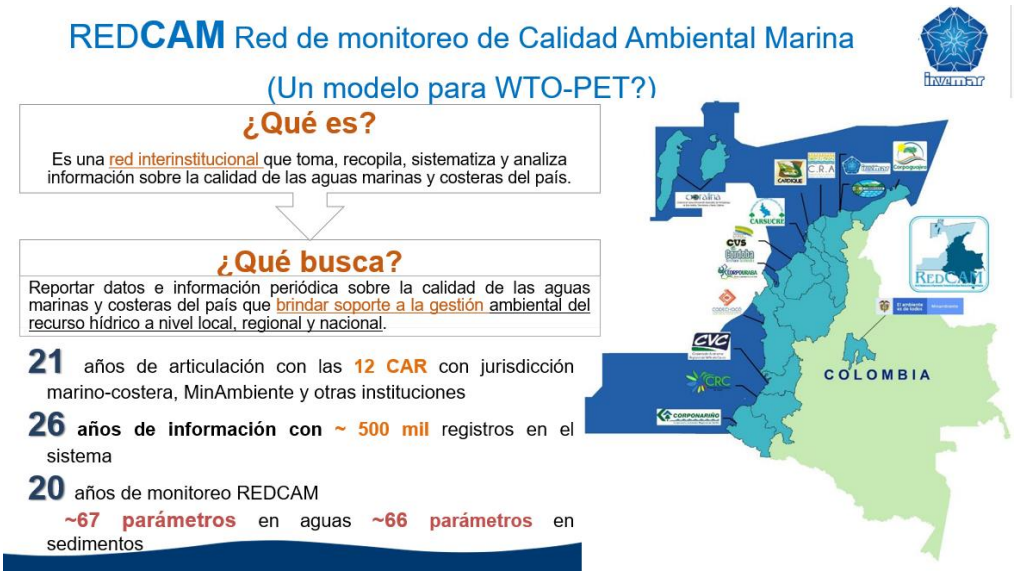


FIGURE 9. REDCAM STRUCTURE AS A MODEL OF WTO-PET

As a final point, Francisco presented a proposal based on the experience of Colombia and triggered by the Environmental National System (SINA), the Maritime General Directorate (DIMAR), as a result of a joint team of experts, installed infrastructure, the research vessels, and the experience, to generate the *Neotropical benthic digital habitat map,* an opportunity to discover the seascapes of our Region – NeoSeascapes. The objective of this proposal would be to generate high-resolution and high-quality seascapes maps as a contribution to the Global Digital Ocean Map. The collection of information would require expeditions over distinctive unknown areas to gather biodiversity inventories into a standardized matter (using OBIS) that has a precise incidence on ocean health. The initiative will also seek to build on the Regions needs and joined capacities. It is intended that this proposal will be presented in the upcoming Decade Programme Call of Action under the support and collaboration of many actors in the Region attending the Workshop, under the umbrella of equity, participation, gender equality, collaboration, building capacity and generation of information towards the sustainable development of the Ocean.

The AHAROWG will prepare a proposal for a regional decade action focusing on the previous point for adoption and endorsement through the Ocean Decade Governance bodies and mechanisms. The proposal will be prepared in close collaboration with other WTA working groups and relevant stakeholders from the private, public, and academic sectors.

Francisco thanked the team of IOCARIBE, under the guidance of Cesar Toro, COI Secretariat Members, the translation team, the Panel of experts, and the team of researchers of INVEMAR for the summary of the meeting highlights and next steps. He announced IOCARIBE's remaining Decade Workshops, as per Annex 3.

A final video in sign language made by Laura Herrán was presented as a sample of an Ocean Literacy ongoing action.

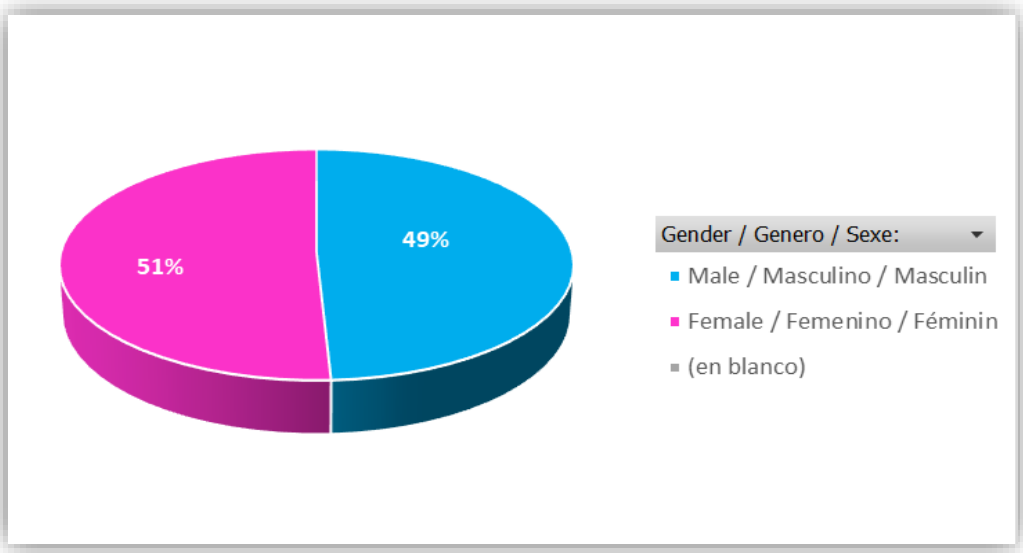
WTA ATAOWG Webinar Series Update (Annex 4)

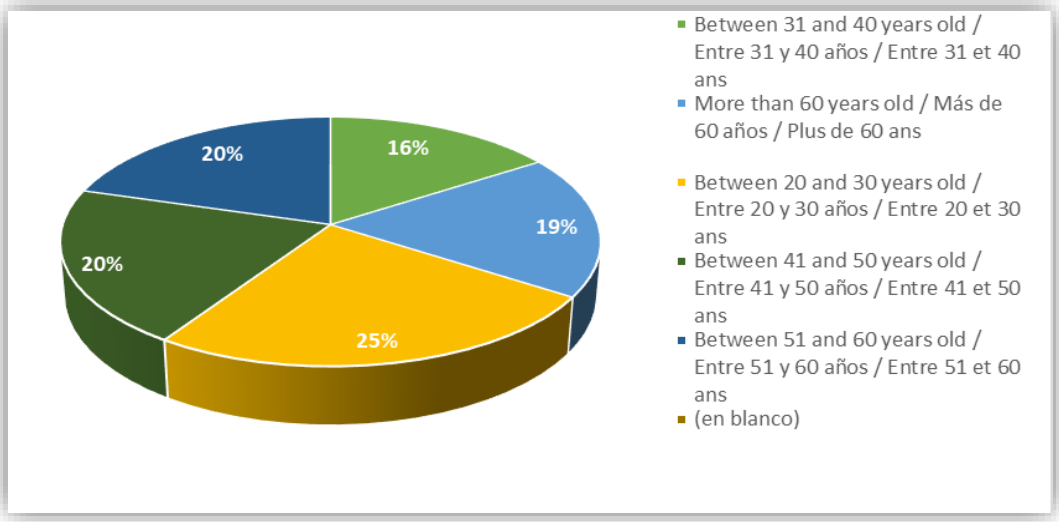
The IOCARIBE Representative thanked the chair and rapporteur for their summary of meeting highlights and next steps. He announced IOCARIBE's remaining Decade Workshops, as per Annex 4.

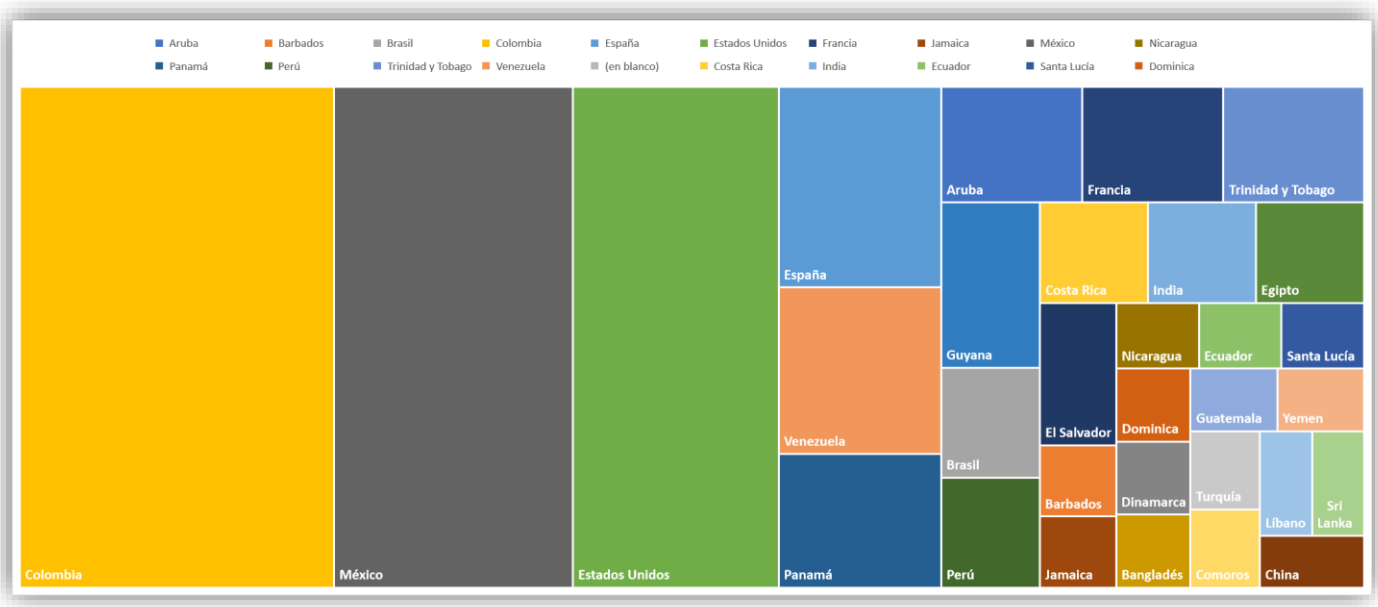
6. ANNEX 1

WORKSHOP PARTICIPANTS

The workshop recorded attendance of 125 registered participants, with an equal gender, generation distribution and geographically diverse.






Aruba
Barbados
Brasil
Colombia
España
Estados Unidos
Francia
Jamaica
México
Nicaragua
Panamá
Perú
Trinidad y Tobago
Venezuela
(en blanco)
Costa Rica
India
Ecuador
Santa Lucía
Dominica
Colombia
México
Estados Unidos
España
Venezuela
Panamá
Aruba
Francia
Trinidad y Tobago
Guyana
Brasil
Perú
Costa Rica
India
Egipto
El Salvador
Nicaragua
Ecuador
Santa Lucía
Barbados
Dominica
Guatemala
Yemen
Dinamarca
Turquía
Líbano
Sri Lanka
Jamaica
Bangladés
Comoros
China

7. ANNEX 2

AGENDA

The UN Decade of Ocean Science for Sustainable Development 2021-2030:

Tropical Americas a Healthy and Resilient Ocean Co-design Workshop

Thursday, September 9th at 9h00 Colombia Time (10h00 AST, 14h00 UTC).

Hosted by IOC of UNESCO Subcommission for the Caribbean and Adjacent Regions- IOCARIBE

Web: **http://iocaribe.ioc-unesco.org/webinarseries/ahar**

Register at: **http://iocaribe.ioc-unesco.org/webinarseries/ahar/regahar**

Simultaneous interpretation will be provided: English, French and Spanish.

AGENDA

Cartagena Time	ITEM
9:00 – 9:30	**Part 1** **Welcome / Overview**
09:00 – 09:25 9:00 – 9:10	**Welcome and Introduction. Objectives of the Workshop** **Francisco Arias-Isaza** Chair WTA WG Director of INVEMAR
9:10 – 9:20	**Overview of Ocean Decade** **Elva Escobar**. Professor, University of Mexico, Member UN Decade Advisory Board
9:20 – 9:23	**Poll #1 on Familiarity with the Ocean Decade**
9:23 – 9:25	**Video: Decade Actions**
09:25 – 10:05	**Part 2** **State of the Ocean Health in the Western Tropical Atlantic**
09:25 – 09:35	**A healthy Ocean** **Christopher Corbin –** UNEP. Programme Officer, AMEP & CETA
	Survey & Moderation **David Alonso** – INVEMAR Coordinador Programa de Biodiversidad y Ecosistemas Marinos-BEM
	Poll #2 a healthy ocean for a healthy planet

09:35– 09:45	**A Protected Ocean** Julia Miranda – IUCN – WCPA.- Deputy President. **Survey & Moderation** David Alonso – INVEMAR Coordinador Programa de Biodiversidad y Ecosistemas Marinos-BEM **Poll #3 a Protected Ocean**
09:45– 9:55	**Blue Carbon an Opportunity for Restoration** Maria Claudia Diazgranados – CI .- Directora del Programa Carbono Azul **Survey & Moderation** Paula Cristina Sierra-Correa – INVEMAR Coordinadora de Investigación e Información Gestión Marina y Costera- GEZ **Poll #4 Blue Carbon**
9:55– 10:05	**Mapping Marine Ecosystems** Lucy Scott – OIH . Project Manager of the IOC Ocean InfoHub project **Survey & Moderation** Carolina Garcia Valencia – INVEMAR Jefe Análisis de Información para Planificación - GEZ **Poll #5 Mapping Marine Ecosystems**

10:05 – 10:45	**Part 3** **Panel (Open) Discussion: Identifying knowledge gaps and priority areas**
10:15 – 10:35	**Video: Ocean Decade Challenge 2: Protect and restore ecosystems and biodiversity** **Transformative actions & barriers – Panel** **LEAD** Francisco A. Arias Chair WTA AHROWG Director of INVEMAR **KEY QUESTION - 1** *What are the barriers that hinder progress towards achieving the Societal Outcomes of the Ocean Decade in the region?* **KEY QUESTION - 2** *What transformative ocean science solutions will help overcome these barriers, and how could they be implemented throughout the Ocean Decade?*
10:35 – 10:45	**General summary of the results of the workshop** **Moderation.** Paula Cristina Sierra-Correa – INVEMAR

10:45 – 11:00	**Part 4** **Closing Session** **Summary and Call to Action**
10:45 – 10:50	**AHAROWG-Next Steps.** **Francisco Arias** Chair WTA AHROWG Director of INVEMAR
10:50 -10:55	**WTA WG Webinar Series Update.** **Edgard Cabrera** - IOCARIBE
10:55 -11:00	**Closure** **Francisco Arias** Chair WTA AHROWG Director of INVEMAR

8. ANNEX 3

POLL QUESTIONS

POLL #1

How familiar are you with the UN Decade of Ocean Science for Sustainable Development?

a) Extremely Familiar
b) Very Familiar
c) Familiar
d) Not Very Familiar
e) Not at All

See figure 1.

POLL #2

What do you consider to be the main benefits of having a healthy ocean? Select the three options that you consider essential

a) Alternate source of animal protein (non.terrestrial)
b) Pharmaceutical compounds and other natural marine products
c) Source of employment and economic income
d) Better physical and mental health
e) Cultural and social interaction and artistic activities

See figure 3.

POLL #3

With the 30x30 global strategy as a framework, do you consider that efforts in the TA region should be focused on:

a) Designation of new strict protection MPAs
b) Designation of new MPAs for multiple use
c) Designation of other effective area based conservation measures (OECMs)

See figure 4.

POLL #4

2021-2030 Ocean Science & Restoration Decades. Both can help to combat climate change & prevent mass extinction. Mangroves & seagrass are widely distributed except in Antarctica. What are the next steps to promote their protection in Tropical Americas?

a) Promote replication and scaling-up of on going blue carbon initiatives
b) Capacity development on blue carbon issues
c) Establish the baseline information (status of marine and coastal ecosystems, health and restoration indicators, blue carbon stocks, direct and indirect stressors).
d) Monitoring, evaluation and adaptive management.

See figure 5.

POLL #5

What do you consider the greatest constraints to overcome to achieve significant progress in mapping ecosystems in the WTA region? Select only three.

a) Lack of design of strategies/initiatives in many/several countries of the region and not just in a few
b) Limited financing/economic funds to pay for studies and surveys
c) Heterogeneity in mapping capacities of the countries of the region
d) Focus on national objectives that impede transnational results
e) Dispersion of mapping initiatives and dismantling

See figure 6.

9. ANNEX 4

WTA Webinar Series Update

WORKING GROUP	LEADER (S)	DATE/TIME (COT)	TITLE OF WEBINAR	UN PARTNER AGENCY
A safe ocean	Christa von Hillebrandt	**8th July**, 2021; 14:00 – 16:00	"Breaking down the Silos for More Effective Early Hazard Warning Services"	United Nations Office for Disaster Risk Reduction UNDRR
A transparent and accessible ocean	Albert Martis Edgar Cabrera	**29th July**, 2021 9:00 - 11:30	"A transparent Ocean with open information and technologies access"	World Meteorological Organization WMO
Capacity Development	Elva Escobar Ariel Troisi	**19th August** 2021 10:00-12:00	"Deep sea Capacity Development needs in the WTA and the ETP for the Ocean we want"	International Seabed Authority ISA
A Clean Ocean	Lorna Inniss	**31 de August** 2021 9:00-11:00	"The Year 2031, A Clean Ocean - Steps to Success"	UN Environment Programme UNEP Cartagena Convention
A healthy and resilient ocean	Francisco Arias	**9th September**, 2021 9:00-11:00	"Co-designing the path to sail the Decade of Ocean Science to reach the knowledge we need for the ocean we want in the WTA"	
A predicted ocean	Marck Oduber	**23rd September** 2021 9:00-11:30	"Changing the vibe to predict smooth sailing in the WTA and ETP: A Theory of Change approach"	World Meteorological Organization WMO
A sustainably harvested and productive ocean	Alejandro Acosta	**7th October** 2021 9:00 - 11:30	"Co-existing Opportunities and Synergies: Exploring Opportunities for a sustainably harvested and productive ocean in the WTA"	Food and Agricultural Organization FAO