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Building a Roadmap for the implementation of the Ocean Decade in the Tropical Americas and Caribbean (TAC) Region

This document summarises the total of endorsed Decade Actions (Programmes, Projects and Contributions) as March 2024. As well, the document contains a description of endorsed Decade Actions related to the Tropical Americas and the Caribbean Region (TAC).

Annex to the Guiding and Information Document for the TAC Task Force

San Jose, Costa Rica June 4-6, 2024

Prepared for the IOCARIBE of IOC/ UNESCO Secretariat by:
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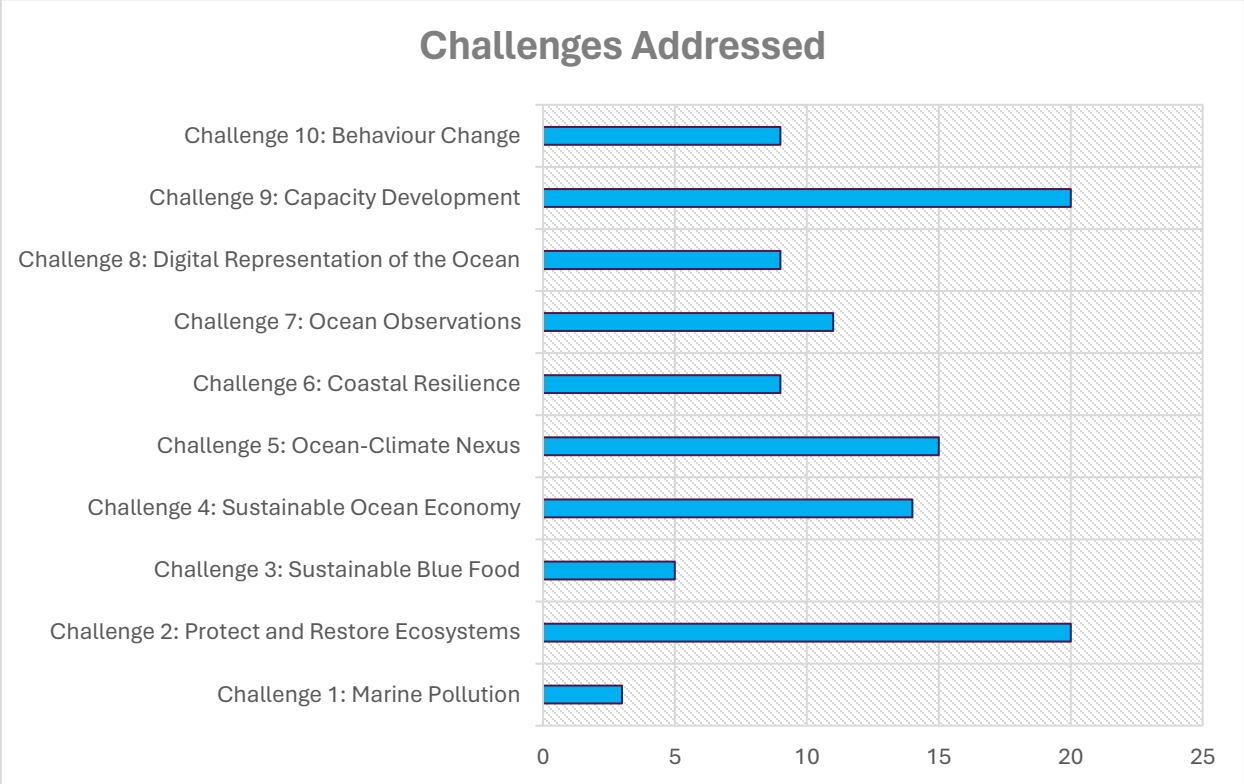
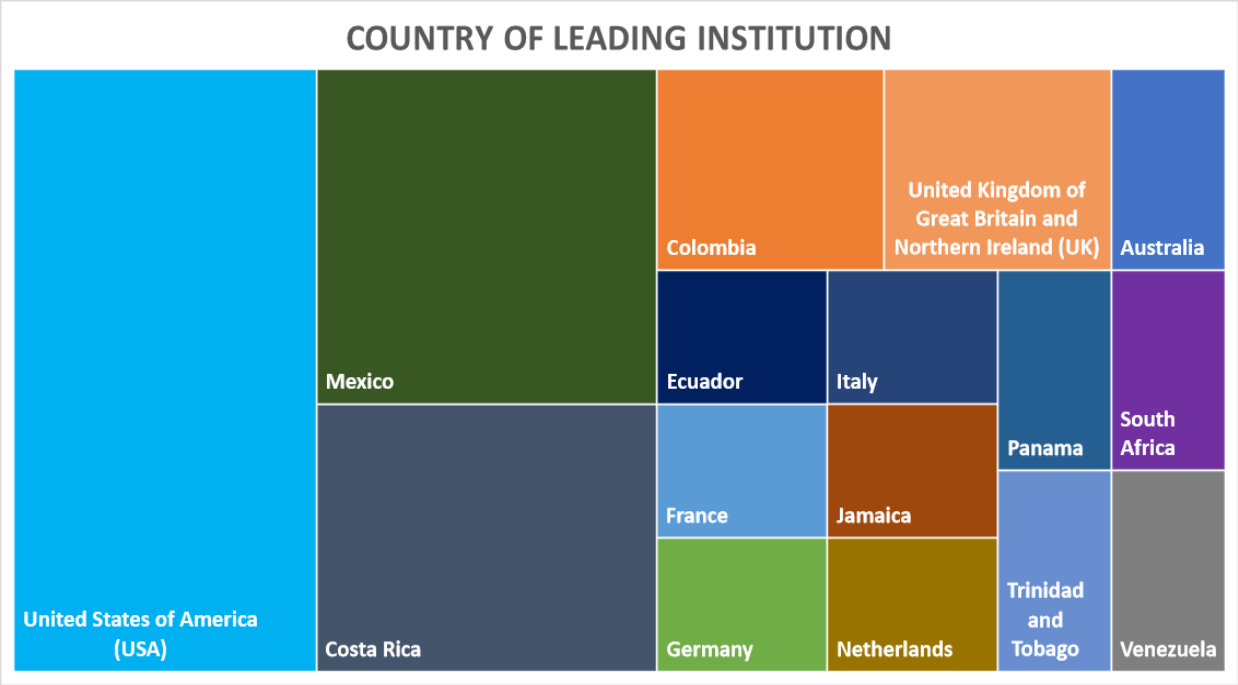
1. CHALLENGES ADDRESSED - TAC REGION

Challenges Addressed	
Challenge 1: Marine Pollution	3
Challenge 2: Protect and Restore Ecosystems	20
Challenge 3: Sustainable Blue Food	5
Challenge 4: Sustainable Ocean Economy	14
Challenge 5: Ocean-Climate Nexus	15
Challenge 6: Coastal Resilience	9
Challenge 7: Ocean Observations	11
Challenge 8: Digital Representation of the Ocean	9
Challenge 9: Capacity Development	20
Challenge 10: Behaviour Change	9



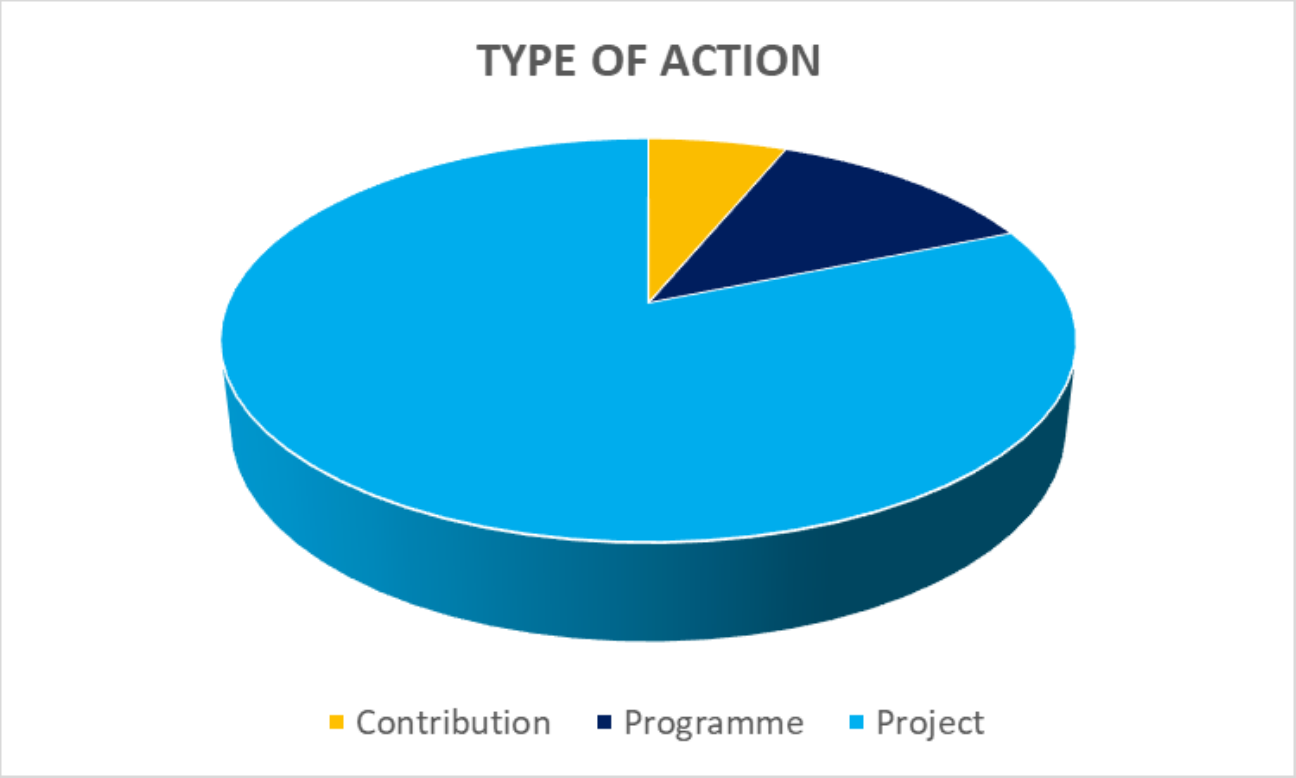
2. COUNTRY OF LEADING INSTITUTION - TAC REGION

Country of leading institution	
Australia	1
Colombia	2
Costa Rica	4
Ecuador	1
France	1
Germany	1
Italy	1
Jamaica	1
Mexico	5
Netherlands	1
Panama	1
South Africa	1
Trinidad and Tobago	1
United Kingdom of Great Britain and Northern Ireland (UK)	2
United States of America (USA)	8
Venezuela	1
Grand total	**32**


COUNTRY OF LEADING INSTITUTION
United States of America (USA)
Mexico
Costa Rica
Colombia
United Kingdom of Great Britain and Northern Ireland (UK)
Australia
Ecuador
Italy
Panama
South Africa
France
Jamaica
Germany
Netherlands
Trinidad and Tobago
Venezuela

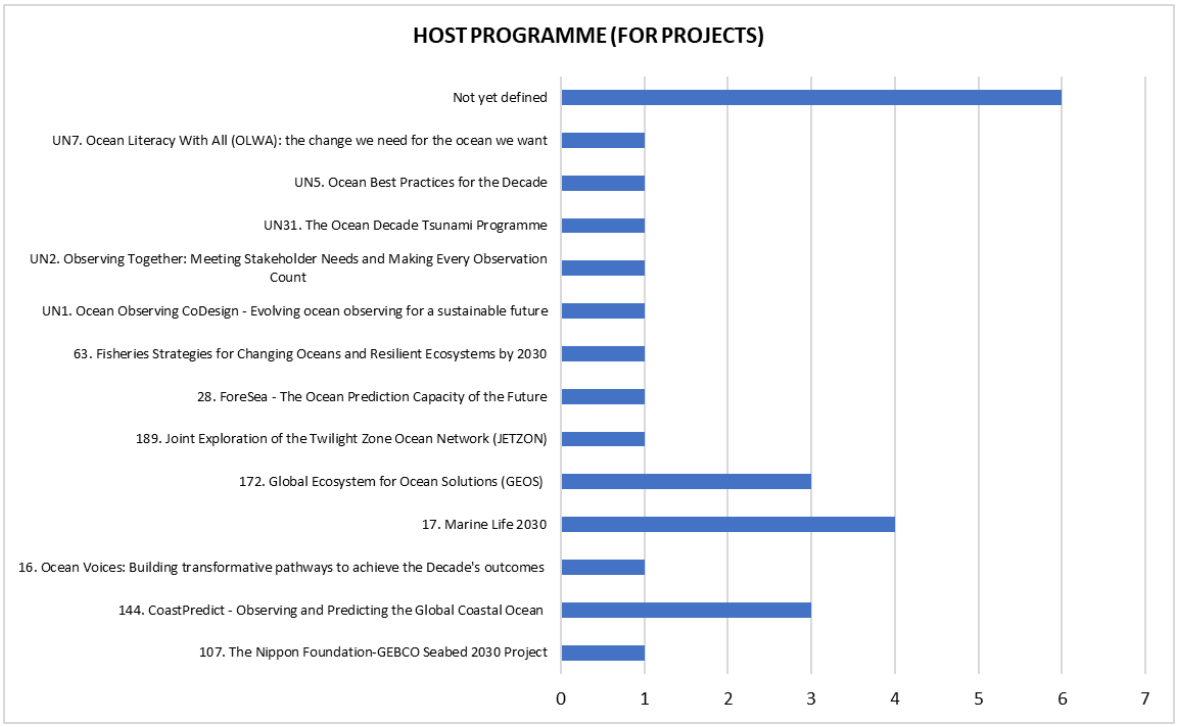
3. TYPE OF ACTION - TAC REGION

Type of Action	
Contribution	2
Programme	4
Project	26
Grand total	**32**



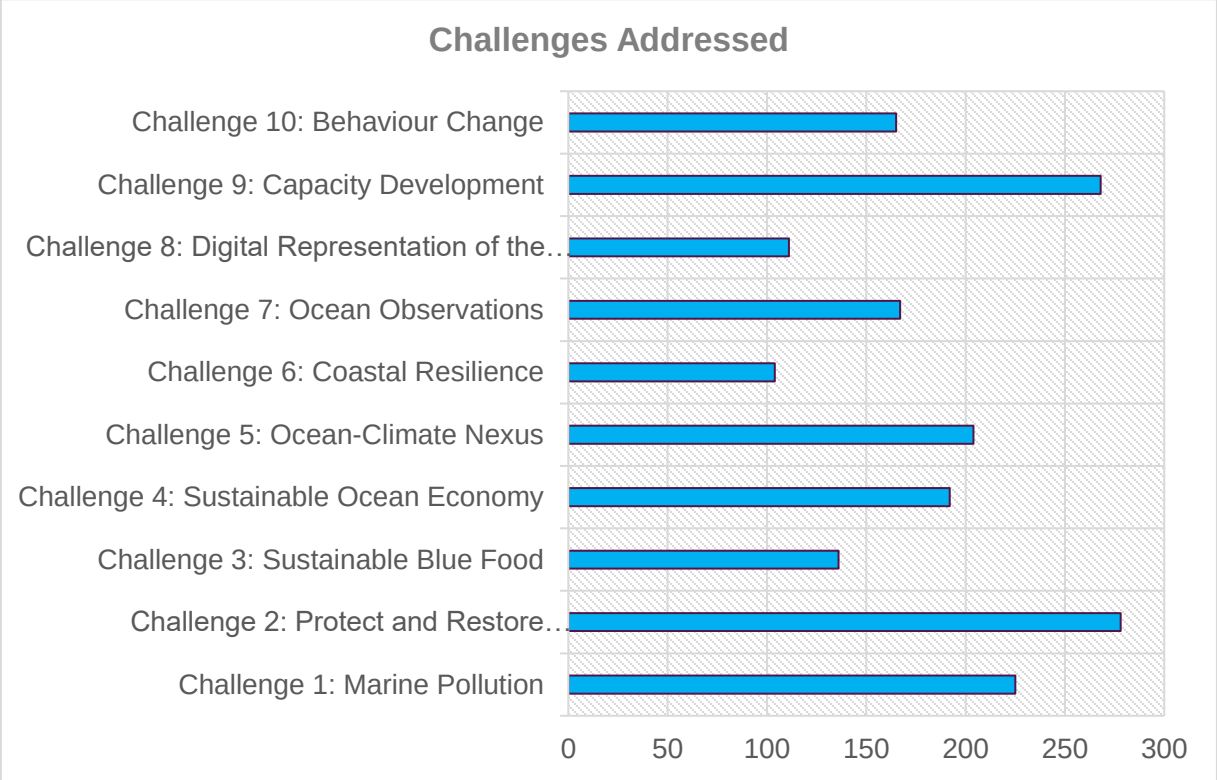
4. HOST PROGRAMME (FOR TAC PROJECTS)

Host Programme (for projects)	
107. The Nippon Foundation-GEBCO Seabed 2030 Project	1
144. CoastPredict - Observing and Predicting the Global Coastal Ocean	3
16. Ocean Voices: Building transformative pathways to achieve the Decade's outcomes	1
17. Marine Life 2030	4
172. Global Ecosystem for Ocean Solutions (GEOS)	3
189. Joint Exploration of the Twilight Zone Ocean Network (JETZON)	1
28. ForeSea - The Ocean Prediction Capacity of the Future	1
63. Fisheries Strategies for Changing Oceans and Resilient Ecosystems by 2030	1
UN1. Ocean Observing Co-Design - Evolving ocean observing for a sustainable future	1
UN2. Observing Together: Meeting Stakeholder Needs and Making Every Observation Count	1
UN31. The Ocean Decade Tsunami Programme	1
UN5. Ocean Best Practices for the Decade	1
UN7. Ocean Literacy With All (OLWA): the change we need for the ocean we want	1
Not yet defined	6
Grand total	**26**


HOST PROGRAMME (FOR PROJECTS)
Not yet defined
UN7. Ocean Literacy With All (OLWA): the change we need for the ocean we want
UN5. Ocean Best Practices for the Decade
UN31. The Ocean Decade Tsunami Programme
UN2. Observing Together: Meeting Stakeholder Needs and Making Every Observation Count
UN1. Ocean Observing CoDesign - Evolving ocean observing for a sustainable future
63. Fisheries Strategies for Changing Oceans and Resilient Ecosystems by 2030
28. ForeSea - The Ocean Prediction Capacity of the Future
189. Joint Exploration of the Twilight Zone Ocean Network (JETZON)
172. Global Ecosystem for Ocean Solutions (GEOS)
17. Marine Life 2030
16. Ocean Voices: Building transformative pathways to achieve the Decade's outcomes
144. CoastPredict - Observing and Predicting the Global Coastal Ocean
107. The Nippon Foundation-GEBCO Seabed 2030 Project
0
1
2
3
4
5
6
7

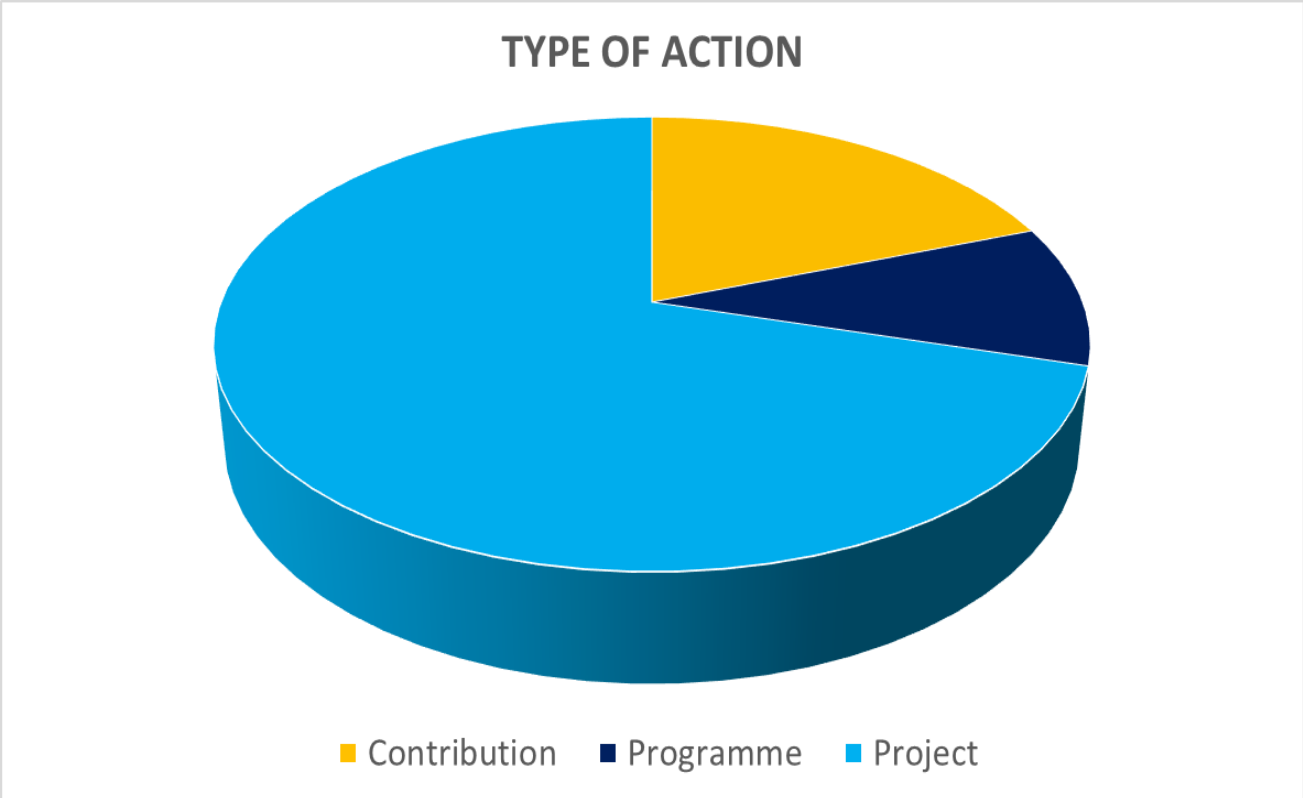
5. CHALLENGES ADDRESSED - GLOBAL

Challenges Addressed	
Challenge 1: Marine Pollution	225
Challenge 2: Protect and Restore Ecosystems	278
Challenge 3: Sustainable Blue Food	136
Challenge 4: Sustainable Ocean Economy	192
Challenge 5: Ocean-Climate Nexus	204
Challenge 6: Coastal Resilience	104
Challenge 7: Ocean Observations	167
Challenge 8: Digital Representation of the Ocean	111
Challenge 9: Capacity Development	268
Challenge 10: Behaviour Change	165



6. TYPE OF ACTION – GLOBAL

Type of Action	
Contribution	100
Programme	52
Project	364
Grand total	**516**



7. PROGRAMME – GLOBAL

Unique ID	Name of the Proposal
9	Global Ocean Corps and Conveyor
12	Ocean Decade Research Programme on the Maritime Acoustic Environment
14	The Coral Reef Sentinels: A Mars Shot for Blue Planetary Health
15	Early Career Ocean Professionals
16	Ocean Voices: Building transformative pathways to achieve the Decade's outcomes
17	Marine Life 2030
26	Ocean Biomolecular Observing Network
28	ForeSea - The Ocean Prediction Capacity of the Future
34	Ocean Cities, an international network of cities in harmony with the marine environment
46	The Science We Need for the Mediterranean Sea We Want
57	Challenger 150 - A Decade to Study Deep-Sea Life
63	Fisheries Strategies for Changing Oceans and Resilient Ecosystems by 2030
64	Empowering Women for the United Nations Decade of Ocean Science for Sustainable Development
69	Cultural Heritage Framework Programme
76	Global Ocean Oxygen Decade
77	One Ocean Network for Deep Observation
84	Pacific solutions to save our ocean: an integrated ocean science programme towards a healthy Blue Pacific Continent to sustain future generations.
90	Sustainability of Marine Ecosystems through global knowledge networks (SMARTNET)
97	An Observing Air-Sea Interactions Strategy (OASIS)
107	The Nippon Foundation-GEBCO Seabed 2030 Project
109	The Hydrous presents: The Decade of Ocean Empathy
118	SUstainability, Predictability and REsilience of Marine Ecosystems (SUPREME)
129	Deep Ocean Observing Strategy (DOOS)
137	Digital Twins of the Ocean (DITTO)
138	Blue Climate Initiative - Solutions for People, Ocean, Planet
144	CoastPredict - Observing and Predicting the Global Coastal Ocean
161	Deltas associated with large rivers: Seeking solutions to the problem of sustainability
172	Global Ecosystem for Ocean Solutions (GEOS)
176	Global Estuaries Monitoring (GEM) Programme

Unique ID	Name of the Proposal
189	Joint Exploration of the Twilight Zone Ocean Network
219	Ocean Acidification Research for Sustainability - Providing society with the observational and scientific evidence needed to sustainably identify, monitor, mitigate and adapt to ocean acidification; from local to global scales
1.3	Nutrition sensitive marine aquaculture in Africa (AfriMAQUA)
11.2	Global Ocean Decade Programme for Blue Carbon
12.4	Digital Deep-sea Typical Habitats
14.5	The Nippon Foundation-Nekton Ocean Census
18.2	Ocean to climate Seamless Forecasting system
20.2	Healthy Rivers, Healthy Ocean
21.5	Antarctica Sci&Infra for Synchronous Observation (Antarctica InSync)
4.3	Sustainable Blue Food Futures for People & Planet (BlueFood Futures)
6.5	Nutrient Pollution – Global Action Network
8.2	Global Ocean Negative Carbon Emission
9.5	World Harbour Seascape Restoration Programme
UN1	Ocean Observing Co-Design - Evolving ocean observing for a sustainable future
UN2	Observing Together: Meeting Stakeholder Needs and Making Every Observation Count
UN25	An Ocean Data and Information System supporting the UN Decade of Ocean Science for Sustainable Development (OceanData 2030)
UN26	Global Environment Monitoring System for the Ocean and Coasts (GEMS Ocean) Programme
UN31	The Ocean Decade Tsunami Programme
UN35	Harmful Algae Bloom Solutions
UN4	Digital innovation Hand-in-Hand with fisheries and ecosystems scientific monitoring
UN5	Ocean Best Practices for the Decade
UN6	The EAF-Nansen Programme - Supporting the Application of the Ecosystem Approach to Fisheries (EAF) management, considering climate and pollution impacts
UN7	Ocean Literacy With All (OLWA): the change we need for the ocean we want

8. ACTIONS - TAC REGION

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
9.5	World Harbour Seascape Restoration Programme	This Programme brings together multiple ecosystem restoration initiatives to provide a template for restoration of whole seascapes on urbanized areas across the globe. The WHSR Programme focus on ecosystems well-known for their current degradation status and their important ecosystem services such as seagrass beds, shellfish reefs, kelp forests, saltmarshes, mangroves, rocky reefs and coral reefs. Additionally, in collaboration with the internationally awarded Living Seawalls Project, this Programme will enhance and rehabilitate ecosystem services of urbanized areas where ecosystem restoration is unfeasible with the use of innovative solutions such as seawall habitat panels and ReefPods. This project will be amongst the first, globally, to move beyond habitat-by-habitat approaches to restoration, to provide an example of how multispecies restoration can be conducted at scale to not only	Programme	Sydney Institute of Marine Science	Australia	Challenge 2: Protect and Restore Ecosystems, Challenge 4: Sustainable Ocean Economy, Challenge 10: Behaviour Change	North Atlantic Ocean, South Atlantic Ocean, North Pacific Ocean, South Pacific Ocean, Indian Ocean, Southern Ocean, Mediterranean Sea, Caribbean Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
		maximise ecological but also socio-economic benefits.					

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
138.2	Integrating Coastal Hazard Warning Systems for TAC	Participants in TAC workshops recommended the Co-Design, Co-Production and Co-Delivery of Integrated Multiple Coastal Hazard Early Warning System and Services for the Tropical Americas and Caribbean (TAC). The project will prioritize the integration of existing and new coastal hazards early warning systems and services considering four components: Monitoring and Warning, Risk Knowledge, Warning Dissemination and Communication, and Response Capabilities, supported by capacity development. Linkages to regional and international efforts and national and local priorities would be maximized and strengthened. Many ocean-related hazards and their impacts would be considered, including Tropical Cyclones, Climate Change, Tsunami, Sargassum, Wastewater, Oil Spills, and Coral Bleaching, mindful of the impacts and lessons from COVID-19. Regional, national and local impacts will be identified and common features of the underlying infrastructure elements will be enhanced and optimized.	Project	IOCARIBE + ICG	Colombia	Challenge 6: Coastal Resilience Challenge 7: Ocean Observations Challenge 10: Behaviour Change	North Atlantic Ocean, Caribbean Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
133.2	Gain knowledge to respond to multiple stressors	During preliminary workshops, key oceans-related research priorities were identified & it was recognized that in order to manage multiple stressors, there is need for observations on marine & coastal life & related socio-economic impacts. There is a need to fill priority knowledge gaps of ecosystems, & their responses to multiple stressors & develop tools to implement management frameworks that build resilience, recognize thresholds & avoid ecological tipping points. There is a need to unify programs & efforts whilst enhancing technical capacities (lack of data, information & research) through institutional expertise across the region to develop integrated solutions. There is a pressing need to develop solutions to monitor, protect, manage & restore ecosystems & their biodiversity under changing environmental, social & climate conditions whilst addressing the lack of baseline scientific information on oceans & their biological diversity as well as the low investment in ocean science	Project	INVEMAR Instituto de Investigaciones Marinas y Costeras José Benito Vives de Andréis	Colombia	Challenge 2: Protect and Restore Ecosystems Challenge 4: Sustainable Ocean Economy Challenge 9: Capacity Development	Tropical Americas and Caribbean Region

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
4.4	Red de Tecnologías para el Océano	The action consists in accelerating marine technology capacity and infrastructure in Costa Rica and the region. The mission is to generate and provide free access to oceanographic data for the sustainable development of society and coastal communities. Our vision is to become a multidisciplinary network that contributes towards implementation of ocean observing technologies and ocean detection. To consolidate a team of professionals that facilitates and promotes the installation. maintenance and communication of marine technologies and oceanographic data derived.	Project	Colectivo Internacional Pelagos Okeanos	Costa Rica	Challenge 2: Protect and Restore Ecosystems Challenge 8: Digital Representation of the Ocean Challenge 9: Capacity Development	North Pacific Ocean, Caribbean Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
25.4	Tsunami & Climatic RR at Protected Areas in CR	Over 25% of Costa Rican territory are Wildlife Protected Areas (WPA) and nature tourism is one of the main economic activities of the country, particularly at coastal areas. This project is led by the Program SINAMOT, with the support of the Environmental Sciences and the Psychology Schools of the National University. The goal is to enhance tsunami and climatic preparedness on WPAs through the interdisciplinary construction of tsunami inundation and evacuation maps. preparedness and response plans and action plans to decrease the climatic and psychosocial vulnerability. The project will develop a manual for other coastal WPAs to increase their tsunami preparedness and decrease their climatic and psychosocial vulnerability. The team at the National University is working closely with the National Emergency Commission on Risk Prevention and Emergency Response and the National System of Conservation Areas.	Project	SINAMOT Program. National University Costa Rica (UNA)	Costa Rica	Challenge 5: Ocean-Climate Nexus Challenge 6: Coastal Resilience Challenge 8: Digital Representation of the Ocean	North Pacific Ocean, Caribbean Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
26.5	Blue Economy Coalition for Ocean Climate Solutions	Introducing the Blue Economy Coalition for Ocean Climate Solutions, our transformative response to the UN Ocean Decade's call for collaboration. In Central America and the Caribbean, our mission unites public, private, and academic sectors to drive sustainable development. Through innovative research, investments, and collaborations, we address urgent ocean challenges with effective carbon removal strategies. Partnerships, knowledge sharing, and mobilization aim to position the region as an ocean resilience and carbon neutrality leader. Fostering collaboration accelerates tech development, marine industries, and coastal communities. Our focus on carbon removal aligns with climate action, protecting marine ecosystems. Join us in shaping a sustainable future, striding towards UN Decade goals for a positive, lasting ocean impact.	Project	Mar y Comercio	Costa Rica	Challenge 1: Marine Pollution , Challenge 4: Sustainable Ocean Economy , Challenge 9: Capacity Development	Caribbean Sea, Eastern Tropical Pacific and Central Pacific Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
197	Costa Rica and Honduras collective action for the implementation of the Voluntary Guidelines for the sustainability of small scale fishing in the context of food security and poverty eradication.	Strengthening collective and individual capacity of small scale fisheries organizations in both Pacific and Caribbean coasts of Costa Rica for the implementation of the SSF guidelines including the necessary areas related to tenure rights, access to responsible fishing, generation of knowledge, gender approach and adaptation to climate change within others to share the experience for the International year of the small scale fisheries 2023.	Project	CoopeSoliDar R.L	Costa Rica	Challenge 3: Sustainable Blue Food Challenge 4: Sustainable Ocean Economy Challenge 5: Ocean-Climate Nexus Challenge 7: Ocean Observations Challenge 8: Digital Representation of the Ocean Challenge 9: Capacity Development Challenge 10: Behaviour Change	North Pacific Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
184	Ocean Literacy Programme for coastal communities in Ecuador	Amiguitos del Oceano works directly in coastal communities' schools by implementing an educational program addressing one of the worst environmental issues we are facing worldwide: plastic pollution. We are tackling this issue thru education, but in a different way. We seek to reduce and prevent ocean pollution through ocean literacy, encouraging people to change practices and habits helping the conservation of ecosystems, biodiversity and human health. This programme carries out innovative methodologies so children can understand why it is so important to take care the ocean, and local communities can also be part of the management and conservation of our environment through education with an affective, playful, practical, intercultural, holistic approach that promotes responsible consumption in the population and empathy with our environment. We have educated more than 10,000 kids in 34 coastal communities and collected almost 4 tones of garbage in 38 beach clean-ups. Our data shows exactly what we teach: single use plastics are chocking our ocean, lots of species and us.	Project	Fundación Amiguitos del Océano	Ecuador	Challenge 1: Marine Pollution Challenge 2: Protect and Restore Ecosystems Challenge 3: Sustainable Blue Food Challenge 5: Ocean-Climate Nexus Challenge 9: Capacity Development Challenge 10: Behaviour Change	South Pacific Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
159	SEA'TIES - Sharing solutions with coastal cities to tackle sea-level rise	SEA'TIES is an international programme that mobilizes coastal cities with a diversity of climatic, geographical, social, economic and political contexts. It aims in facilitating the design of public policies and the implementation of sustainable adaptation solutions for coastal cities exposed to sea level rise. The Ocean & Climate Platform's initiative targets policymakers, city managers and all stakeholders involved in this process. The programme promotes best practices on climate change adaption and suggests enhancing further discussion on experiences and lessons learned across the world based on scientific expertise.	Project	Ocean & Climate Platform	France	Challenge 2: Protect and Restore Ecosystems Challenge 4: Sustainable Ocean Economy Challenge 5: Ocean-Climate Nexus Challenge 8: Digital Representation of the Ocean	North Atlantic Ocean, South Atlantic Ocean, North Pacific Ocean, South Pacific Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
73.4	Marine carbon sinks in decarbonisation pathways	To support pathways to mitigate the increasingly drastic consequences of human-made climate change & to achieve the Paris Agreement goals, the removal of atmospheric CO2 is an important measure alongside massive CO2 emission reductions. The research mission CDRmare (https://cdrmare.de/en/) investigates whether and to what extent the ocean, its habitats & ecosystems can play a significant role in removing and storing CO2 from the atmosphere. It also considers linkages with & impacts on the marine environment, Earth system, and society, as well as monitoring approaches in a changing environment. The research mission will establish relevant assessment criteria and, in the long term, strategies towards the sustainable use of marine carbon storage & removal at national, regional to global scales, in close dialogue with stakeholders, CDRmare outcomes can be used e.g. for knowledge exchange, capacity development activities and co-designed solution roadmaps that will be developed under GEOS.	Project	GEOMAR Helmholtz Centre for Ocean Research Kiel	Germany	Challenge 4: Sustainable Ocean Economy Challenge 5: Ocean-Climate Nexus Challenge 9: Capacity Development	North Atlantic Ocean, North Pacific Ocean, Indian Ocean, North Sea. Baltic Sea. Caribbean. Strait of Malacca. South China Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
144	CoastPredict - Observing and Predicting the Global Coastal Ocean	CoastPredict will transform the science of observing and predicting the Global Coastal Ocean, from river catchments, including urban scales, to the oceanic slope waters. It will integrate observations with numerical models to produce predictions with uncertainties from extreme events to climate, for the coastal marine ecosystems (their services), biodiversity, co-designing transformative response to science and societal needs. CoastPredict will re-define the concept of the Global Coastal Ocean, focusing on the many common worldwide features, to produce obervations and predictions of natural variability and human-induced changes in the coastal areas and upgrade the infrastructure for exchange of data with standard protocols.	Programme	Alma Mater Studiorum University of Bologna	Italy	Challenge 5: Ocean-Climate Nexus Challenge 6: Coastal Resilience Challenge 7: Ocean Observations Challenge 8: Digital Representation of the Ocean Challenge 9: Capacity Development	Indian Ocean, North Pacific Ocean, South Pacific Ocean, North Atlantic Ocean, South Atlantic Ocean, Arctic Ocean, Southern Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
140.2	MACHC-IOCARIBE Seabed 2030 Project	The priority Project outcome is to create an accurate, observation-based bathymetric map of the Tropical Americas and Caribbean Region through multi-sector partnerships and collaboration. This map is essential for the sustainable use of critical ocean resources and to inform and improve forecast capabilities, disaster risk reduction and response, environmental management and scientific investigation activities. A diverse region that has rich biodiversity and marine resources, many economies are dependent on coastal and marine tourism. The region is also extremely vulnerable to climate change and natural hazards. Extreme weather events are common in the region with nine Category 3 hurricanes and above occurring in 2019-2020. Currently 23% of the region is mapped according to the GEBCO 2021 Grid, an increase of 3% since 2020 when the IOCARIBE and the MACHC initiated this joint Project. This progress is highly encouraging given the pandemic circumstances.	Project	National Land Agency Hydrographic Unit	Jamaica	Challenge 5: Ocean-Climate Nexus Challenge 6: Coastal Resilience Challenge 8: Digital Representation of the Ocean	Tropical Americas and Caribbean Region

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
10	Manejo Costero Integrado como Medida de Adaptación al Cambio Climático Integrated Coastal Management as an Adaptation to Climate Change Measure	The Integrated Coastal Management Initiative has been created as a Measure of Adaptation to Climate Change, it involves research institutions, organized civil society and private initiative. Its objective is to recover the environmental services of the marine-coastal ecosystem affected by massive sargassum arrivals. The process begins with a systematic and highly efficient satellite detection of sargassum, with these inputs and the complement of aerial images taken with a drone or plane, the dynamics of sargassum will be modeled at a very high resolution, using extensive tools and computing capabilities to generate early warnings of the arrival of sargassum. With this information, a second operational hydrodynamic model will be implemented, which will allow to coordinate the daily operation, both maritime and land, of collection, transfer, collection and disposal of sargassum, efficiently and with greater safety.	Project	Instituto de Ciencias del Mar y Limnología UNAM	Mexico	Challenge 2: Protect and Restore Ecosystems Challenge 4: Sustainable Ocean Economy Challenge 5: Ocean-Climate Nexus Challenge 6: Coastal Resilience Challenge 7: Ocean Observations	North Atlantic Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
136.2	Enhancing capacity development in the TAC Region	During the TAC Region Webinars capacity building was identified at the forefront and a cross-cutting subject. It was recognized that developing local expertise with lasting benefits can lead to transformative change in CD. It was also recognized that the lack of access to knowledge, equipment and opportunities are relevant barriers to achieving regional sustainable development. Implementing blue economy policies is recognized as critical to achieving the SDGs and delivering smart, sustainable, and inclusive growth. It was identified during the Kick-Off Conference that the region must develop local initiatives related to raise awareness on blue economy knowledge, and that promoting engagement among stakeholders and local expertise is relevant to address this need. It is critical to create an enabling environment for experience exchange on ocean public policy targeting local blue economy initiatives, and to enhance knowledge about the blue economy (including deep-sea uses) in the Region	Project	Universidad Nacional Autónoma de México (UNAM)	Mexico	Challenge 4: Sustainable Ocean Economy Challenge 9: Capacity Development Challenge 10: Behaviour Change	North Atlantic Ocean, South Atlantic Ocean, North Pacific Ocean, South Pacific Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
137.2	Ocean Literacy in the TAC Region	During the TAC Region Webinars capacity building was identified as a cross-cutting subject that should be promoted in all levels. However, the unequal distribution of information across generations and genders was identified as a relevant barrier to achieve an inspiring and engaging ocean by 2030. During the TAC Regional Webinar on CD, it was identified that unequal access to knowledge is a challenge to the sustainable development of the ocean and that it is crucial to adopt an efficient method to engage with, or approach and exchange knowledge with local communities and traditional knowledge holders. During the Kick-Off Conference, it was identified that there is a lack of visibility to local efforts, that understanding OL is a gap for decision-makers. The project thus intends to address the regional need to promote OL as a tool to transform ocean knowledge into actions that lead to ocean sustainability	Project	Universidad Nacional Autónoma de México (UNAM)	Mexico	Challenge 4: Sustainable Ocean Economy Challenge 9: Capacity Development Challenge 10: Behaviour Change	North Atlantic Ocean, South Atlantic Ocean, North Pacific Ocean, South Pacific Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
37	Ocean Monitoring and Prediction Network for the Sustainable Development of the Gulf of Mexico and the Caribbean	We propose to develop a network of ocean observation systems and regional forecasting models of ocean circulation, to provide baseline information on the oceanographic, biogeochemical and ecological state, changes and trends of the large ecosystem of the Gulf of Mexico and the Caribbean. To assess the vulnerability of key species and marine habitats to extreme natural events and economic developmental pressures, such as large oil spills, and the emerging long-term trends of deoxygenation, ocean acidification, harmful algal blooms, warming of the surface ocean, and to provide information, knowledge and tools for mitigation and adaptation strategies. To enhance capacity building and inspire the next generation of scientists, policy makers and stakeholders in the greater Caribbean region for the sustainable development of the ocean.	Project	Consorcio de Investigación del Golfo de México (CIGOM)	Mexico	Challenge 1: Marine Pollution Challenge 2: Protect and Restore Ecosystems Challenge 5: Ocean-Climate Nexus Challenge 6: Coastal Resilience Challenge 7: Ocean Observations Challenge 8: Digital Representation of the Ocean Challenge 9: Capacity Development	North Atlantic Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
119	Resilience of the ecosystems, fisheries and marine-based economy under a persistent anomalous warm and low-productivity regime in the Gulf of California	The Gulf of California (GOC) is a region of high biodiversity that supports the majority of Mexico's commercial and sport fisheries. During 2014-2020, this region experienced a period of intense oceanic warming and decreased productivity (chlorophyll-a concentration) compared to satellite (1980-2020) or historical (1900-2020) data. This Decade Programme is a multidisciplinary collaboration of institutions and independent stakeholders from Mexico and USA to evaluate the impacts of present and future climatic conditions on the biodiversity and fisheries of the GOC and to identify mitigation strategies during the decade 2020-2030.	Project	Instituto de Ciencias del Mar y Limnologí-a, Universidad Nacional Autónoma de México	Mexico	Challenge 2: Protect and Restore Ecosystems Challenge 5: Ocean-Climate Nexus Challenge 6: Coastal Resilience Challenge 7: Ocean Observations Challenge 9: Capacity Development	North Pacific Ocean

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
28.5	Surfside Science	Surfside Science is an initiative to co-develop and validate low cost and replicable methods for coastal environmental monitoring on SIDS, making use of remote sensing and low-cost electronics. The goal is to identify which methods can contribute to improving access to data collection systems on small islands, with all methods and findings documented and shared openly. The approach focuses initially on Surfside Bay in Aruba as a case study, and includes development and testing of field monitoring stations, protocols, and remote sensing tools that can be expanded across the island and replicated on other islands. The initial set of parameters to be tested includes to following areas of environmental monitoring: • Air Quality: Particulate matter, humidity and temperature • Water Quality: pH, dissolved oxygen, temperature, and electrical conductivity • Coastal Change: Vegetative cover, coastline, size of reef islands • Seafloor Mapping: Seafloor cover, including shallow reef and aquatic vegetation Instructions for every step of the process are written up and shared for others to	Project	Metabolic Foundation	Netherlands	Challenge 7: Ocean Observations Challenge, Challenge 8: Digital Representation of the Ocean , Challenge 9: Capacity Development	Caribbean Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
		replicate, including protocols for processing of underwater imagery, construction of monitoring stations, adaptation of scripts for satellite imagery analysis, building of localized databases, connecting to our data portal, and further validation.					

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14	The Coral Reef Sentinels: A Mars Shot for Blue Planetary Health	The Coral Sentinel System is a transformative program to deploy autonomous, low-cost robots to monitor the health of coral reefs around the world in near real-time. The actionable data this program delivers will enable rapid conservation interventions to protect these reefs from harm while ensuring local ecological, economic, and cultural health. The audacious goals of this program are to develop and demonstrate a scalable monitoring, modeling and decision-support system for reef science and conservation and to adapt each set of solutions to local needs. We plan to move beyond monitoring coral reef decline to finding novel ways to save them.	Programme	The Smithsonian Institution	Panama	Challenge 1: Marine Pollution Challenge 2: Protect and Restore Ecosystems Challenge 3: Sustainable Blue Food Challenge 4: Sustainable Ocean Economy Challenge 8: Digital Representation of the Ocean Challenge 9: Capacity Development Challenge 10: Behaviour Change	Indian Ocean, South Pacific Ocean, North Atlantic Ocean, South Atlantic Ocean

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42.5	Global Coastal Ocean Restoration and Resilience	Restore our Coasts will address coastal restoration and resilience holistically by delivering new solutions for ecosystem restoration and management through a multidisciplinary approach that integrates in-situ observations, use of numerical models for forecasting, economic analyses and projected social impact. The approach will inform the application of site-specific nature-based solutions such as coral reef reintroduction, seagrass and mangroves restoration. Passive restoration measures removing sources of disturbance, such as establishment of marine protected areas, will also be considered. Co-design and continuous stakeholder and user collaboration at Pilot Sites in more than 14 nations, will be an important element to ensure that solutions are co-designed to support community and coastal resilience. Private, government and community representatives will be engaged. Special emphasis will be on developing sustainable and replicable practices that live beyond the project's lifespan.	Project	Institute for Corporate Citizenship (ICC), UNISA	South Africa	Challenge 2: Protect and Restore Ecosystems Challenge 3: Sustainable Blue Food Challenge 5: Ocean-Climate NexusChallenge	North Atlantic Ocean, South Atlantic Ocean, South Pacific Ocean, Mediterranean Sea, Caribbean, Strait of Malacca, Wadden Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
28.4	SIDS Ocean Science Policy Network - Pilot Project	The SIDS Ocean Science Policy Network Pilot Project is a collaborative initiative between the University of the West Indies, the Pacific Community Centre for Ocean Science, the Alliance of Small Island States, the University of Wollongong, and the Nippon Foundation Ocean Voices Programme at the University of Edinburgh. The initiative which was announced at the UN Ocean Conference in Lisbon in June 2022 seeks to support Ocean stewardship in Small Island Developing States (SIDS) by cultivating enabling environments for capacity development. The pilot project provides a platform for SIDS to be active leaders in the Ocean Decade. It addresses the key challenges of capacity building through customized capacity development for early and mid-career emerging SIDS leaders. facilitates cross regional knowledge exchange and intergenerational SIDS to SIDS mentoring, and provides targeted support to empower leaders, organizations, and institutions to develop SIDS led sustainable ocean programs.	Project	University of the West Indies - St. Augustine Campus	Trinidad and Tobago	Challenge 2: Protect and Restore Ecosystems Challenge 4: Sustainable Ocean Economy Challenge 9: Capacity Development	South Atlantic Ocean, North Pacific Ocean, South Pacific Ocean, Indian Ocean, Caribbean Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
58.5	Coastal Observation Lab in a Box	Coastal Observation Lab in a Box (COLaB) will address the critical lack of quality oceanographic data that exists for many coastal ocean regions, most often due to lack of resource in island and rim nations. A key feature will be affordable new instruments for determination of a wide range of biological, physical and biogeochemical parameters. Notably, these can be used to address diverse scientific questions, in settings ranging from nearshore wetlands to the shelf edge, all without need of a formal research vessel or laboratory. Protocols for all methods, combined with in-person training, at regional training camps and as part of the Coast Predict programme, will serve to train up multiskilled, hands-on oceanographers. Modelling tools and an easy-access data management package will help to maximise the value of the standardised observations, both to local end users (food security, ecosystem function and health, hazard resilience etc) and to the global scientific community.	Project	University of Edinburgh	United Kingdom of Great Britain and Northern Ireland (UK)	Challenge 2: Protect and Restore Ecosystems, Challenge 7: Ocean Observations, Challenge 9: Capacity Development	North Atlantic Ocean, South Atlantic Ocean, North Pacific Ocean, South Pacific Ocean, Indian Ocean, Arctic Ocean, Southern Ocean, Mediterranean Sea, Caribbean, Red Sea, Bay of Bengal

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
17.5	ICRI Plan of Action 2021 - 2024	Recognising the window for protecting our coral reef ecosystems is narrow and closing, ICRI members and the Secretariat will work to highlight the critical and urgent need for action at all levels – local, national, regional, and global, to better incorporate science in our actions, strengthen leadership and emerging technologies, while promoting collaboration and communication among stakeholders. Through the “Plan of Action 2021 – 2024: Turning the Tide for Coral Reefs”, ICRI will: reach out to Indigenous Peoples and local communities to ensure their knowledge and intrinsic values of coral reefs are appropriately reflected; new technologies to augment existing monitoring efforts to provide greater understanding of coral reef health/conditions and enable managers to be more responsive to climate change impacts; and take every opportunity to raise the plight of coral reefs and the actions that can be taken at local, regional, and global levels to secure their protection and recovery.	Contribution	International Coral Reef Initiative	United Kingdom of Great Britain and Northern Ireland (UK)	Challenge 2: Protect and Restore Ecosystems Challenge 5: Ocean-Climate NexusChallenge Challenge 9: Capacity Development	North Atlantic Ocean, South Atlantic Ocean, North Pacific Ocean, South Pacific Ocean, Indian Ocean, COBSEA, PERSGA, SACEP, UNEP-Caribbean environment programme, Nairobi Convention, Red Sea, Eastern Tropical Pacific, ROPME

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135.2	TAC Ocean Observing and Forecasting System	During preliminary workshops among constituents in the Tropical Americas and Caribbean (TAC), the need was expressed for the co-design and operation of a sustained integrated ocean observation and forecasting system for the region that will provide essential information for the sustainable development, well-being, prosperity and safety of the region's oceans. The system will be in alignment with the GOOS 2030 Strategy, using a Value Chain approach, connecting OBSERVATIONS through DATA MANAGEMENT for use in ANALYSES and MODELS to create APPLICATIONS. It will have a Governance and Management structure that ensures sustainability, enables and supports broad regional engagement and participation, promotes data and information sharing, and advocate for regional collaboration with the global ocean community. It will promote the development of regional National Observing Systems and collaborate with global Ocean Decade Programs, and utilize both for capacity building and education.	Project	University of the Virgin Islands	United States of America (USA)	Challenge 5: Ocean-Climate Nexus Challenge 6: Coastal Resilience Challenge 7: Ocean Observations	North Atlantic Ocean, Caribbean Sea

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112.2	Submersible Technology to Advance Reef Science	This Decade Action will produce billions of new ocean observations that benefit the coastal ocean and the species and economies that depend on it. It will create a network of citizen science scuba divers who automatically collect environmental data whenever and wherever they dive, and will share those data openly to enhance condition monitoring and scientific research. A low-cost, oceanographic device that attaches to a scuba diver's gear and automatically observes and transmits conductivity, temperature, depth and light (CTD-L) will be built. Sustained engagement with diving interests in the identified action geographies will cultivate stakeholder awareness and participation, and participants will be included in the end-to-end process through an interactive web service, citable data, and feedback from scientists, conservation managers, and environmental agencies. This Decade Action is designed to be scaled globally and continue indefinitely beyond the Action's identified timeframe.	Project	2Degrees C	United States of America (USA)	Challenge 2: Protect and Restore Ecosystems Challenge 5: Ocean-Climate Nexus Challenge 7: Ocean Observations	North Atlantic Ocean, South Atlantic Ocean, South Pacific Ocean, Indian Ocean, Caribbean Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
2.2	Science Without Borders®: Conserving the Tropics	Humanity depends on healthy and diverse ecosystems. Mangroves, seagrasses, and coral reefs host some of the highest biodiversity on Earth. They provide habitat, food, and breeding grounds for marine life, and food, income, and protection to communities. However, these fragile ecosystems are rapidly being degraded. The Living Oceans Foundation spent 10 years mapping and surveying the world's reefs, collecting an array of data, conducting outreach and education activities, and establishing a baseline status of the world's reefs and nearshore habitats. The Science Without Borders® project will leverage this dataset for conservation, using it to improve the monitoring and management of coral reefs, seagrass beds, and mangrove forests. Using our network of in-country partners, this project will allow us to bring science, outreach, and education programs to SIDS and LDC's, engage communities, improve ocean literacy, and develop science-based solutions to conserve tropical marine ecosystems.	Project	Khaled Bin Sultan Living Oceans Foundation (KSLOF)	United States of America (USA)	Challenge 2: Protect and Restore Ecosystems Challenge 3: Sustainable Blue Food	North Atlantic Ocean, North Pacific Ocean, South Pacific Ocean, Indian Ocean, Red Sea, Caribbean Sea

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22.2	Hope for Reefs	Hope for Reefs is a major initiative at the California Academy of Sciences that aims to reverse the rapid decline of Earth's coral reefs in this generation. Over the next five years, we will advance high-impact interventions—from establishing sustainable fisheries and marine protected areas to on-the-reef restoration—all implemented with local communities and cross-sector stakeholders. We will scale a successful model for community reef monitoring to the national level; increase capacity for rapid response to catastrophic events impacting reefs; and apply new technologies to map, monitor, forecast, and regenerate reef health. We will also leverage our world-class education programs and Steinhart Aquarium to inspire and train a diverse cadre of future reef scientists while supporting a global youth corps of emerging environmental leaders advocating on behalf of coral reefs.	Project	California Academy of Sciences	United States of America (USA)	Challenge 2: Protect and Restore Ecosystems Challenge 9: Capacity Development Challenge 10: Behaviour Change	North Atlantic Ocean, South Atlantic Ocean, North Pacific Ocean, South Pacific Ocean, Indian Ocean, Caribbean Sea

Unique ID	Name of the ODA	Brief description	Type of Action	Lead partner Institution and country	Country	Challenges Addressed	Basins Covered
28.2	Global Fund for Coral Reefs	The Global Fund for Coral Reefs deploys and unlocks funding across a blended 'Investment Ecosystem' under a 'protect-transform-restore-recover' approach. Through a coalition of actors in each ecosystem, programming focuses on reducing local drivers of degradation and increasing resilience through a supported pipeline of investable 'reef-positive' interventions (e.g., revenue generating MPAs, mariculture, plastic waste management, sustainable fisheries). Emphasis is placed on LDCs and SIDS in South Asia, the Pacific, the Caribbean and the Indian Ocean, in addition to other priority geographies, where climate-resilient coral reefs support high levels of biodiversity and provide critical ecosystem services. Programmes have already launched in Fiji, Philippines, The Bahamas, Papua New Guinea, Kenya and Tanzania. Currently, the pipeline for 2022 includes more than 20 additional countries.	Contribution	United Nations Multi-Partner Trust Fund Office	United States of America (USA)	Challenge 1: Marine Pollution Challenge 2: Protect and Restore Ecosystems Challenge 4: Sustainable Ocean Economy	South Atlantic Ocean, South Pacific Ocean, Indian Ocean, Southern Ocean, Emphasis is placed on LDCs and SIDS in South Asia, the Pacific, the Caribbean and the Indian Ocean, in addition to other priority geographies, where climate-resilient coral reefs support high

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							levels of biodiversity and provide critical ecosystem services for local coastal communities .

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65.2	The Cozumel Coral Conservatory	The Cozumel Coral Conservatory (CozCC) is a unique place to preserve and grow corals uniting science, technology, engineering, arts, and math (STEAM). A diverse coalition of all ages, including nonprofits, universities, individuals, private entities, and governmental institutions, are working to protect, monitor, and rehabilitate the Mesoamerican Barrier Reef in Cozumel, Mexico. The CozCC aims to increase coral coverage, marine biodiversity, and shore protection in the Villa Blanca Reef tract through recognized best practices and groundbreaking innovation while offering novel opportunities for ocean engagement, science education and employment made possible through trans-disciplinary collaboration. Natural coral heads, as well as artistic and functional artificial reef structures and sculptures, populate the seafloor in this shallow reef. The CozCC bridges quantitative science and the originality of hands-on creation to scale coral restoration and strive for a balanced, healthy ocean.	Project	Living Sea Sculpture	United States of America (USA)	Challenge 2: Protect and Restore Ecosystems Challenge 4: Sustainable Ocean Economy Challenge 9: Capacity Development	North Atlantic Ocean, Caribbean

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172	Global Ecosystem for Ocean Solutions (GEOS)	GEOS will develop and deploy a series of equitable, durable, and scalable ocean-based solutions for addressing climate change and Ocean Decade's challenges. It will achieve this through three synergistic mechanisms: the GEOS Network made up of researchers, engineers, innovators, investors, decision-makers, and others, which will co-design the GEOS Task Forces for the co-creation of solution-delivering projects, and the GEOS Innovation Engine that will prototype and deploy those solutions. GEOS initial projects focus on ocean-based carbon dioxide removal, providing adaptation tools to coastal communities, and improving ocean-based human health, with further projects to be developed throughout the Ocean Decade.	Programme	Ocean Visions and Future Seas	United States of America (USA)	Challenge 4: Sustainable Ocean Economy Challenge 5: Ocean-Climate Nexus Challenge 6: Coastal Resilience Challenge 9: Capacity Development	Indian Ocean, North Pacific Ocean, South Pacific Ocean, North Atlantic Ocean, South Atlantic Ocean, Arctic Ocean

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20.3	PROTEUS ™, Space Station of the Ocean	Fabien Cousteau, a team of ocean scientists, educators, social entrepreneurs is building PROTEUS™, a modular underwater saturation diving facility that includes multiple cutting-edge scientific laboratories and a broadcast studio. With an anticipated delivery date of 2025, PROTEUS™ will be situated adjacent to a coral reef within a marine protected area in Curaçao. The new habitat will foster a broad array of research and public engagement approaches, with a focus on using cutting edge science and engineering techniques to address critical challenges facing society such as coral reef health and maintenance of biodiversity; environmental monitoring; human health and well-being; and robotics and technological innovation. PROTEUS™ will promote collaborations among academic researchers and educators with industry, government and non-profit organizations across the planet, and is committed to the co-development of solutions to diverse ocean challenges with local communities of Curaçao.	Project	PROTEUS OCEAN GROUP Ltd	United States of America (USA)	Challenge 2: Protect and Restore Ecosystems Challenge 7: Ocean Observations Challenge 10: Behaviour Change	North Atlantic Ocean, Global reach with a focus on small island states in the Caribbean (Curaçao)

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134.2	TAC Pollutants Observatory	During preliminary workshops, key oceans-related research priorities were identified for a regional program in the Western Tropical Atlantic. These included a need for developing an inventory of contaminant sources along with a regional baseline database & current values, to better understand & interpret the impact of the combination & synergy between pollutants and climate change on marine life along with future changes and trends. Furthermore there is a need to unify programs & efforts whilst enhancing technical capacities through institutional expertise across the region to develop integrated solutions. Thus the development & implementation of a transboundary, multidisciplinary, & cross-sectoral approach such as a regional pollution observatory was warranted. This will help to coordinate, analyze & regularly publish information on marine pollution & produce data that will be curated, credible & open access – to better guide & inform key stakeholders & decision makers	Project	IVIC Instituto Venezolano de Investigaciones Cientificas	Venezuela	Challenge 1: Marine Pollution Challenge 2: Protect and Restore Ecosystems Challenge 9: Capacity Development	Tropical Americas and Caribbean Region