



**2021** United Nations Decade  
**2030** of Ocean Science  
for Sustainable Development

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

## WESTERN TROPICAL ATLANTIC REGIONAL PLANNING GROUP

### MEMBERS



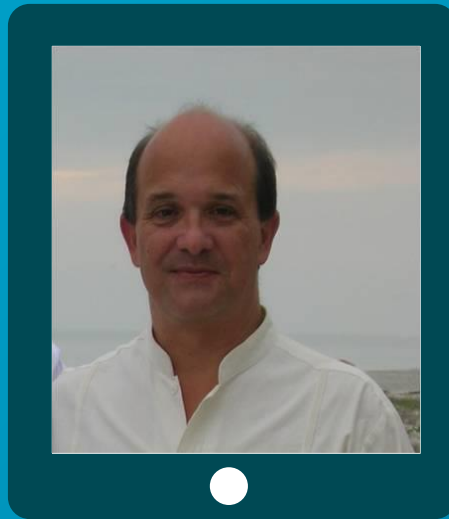
United Nations  
Educational, Scientific and  
Cultural Organization



Intergovernmental  
Oceanographic  
Commission



**Dr. Alejandro ACOSTA**  
Research Administrator  
Florida Fish and Wildlife Conservation  
Commission.  
Science Coordinator  
Gulf Caribbean Fisheries Institute



Dr. Alejandro Acosta is a research administrator at the Fish and Wildlife Conservation Commission's Fish and Wildlife Research Institute in Marathon, FL, U.S. He is a fisheries biologist with a background in reef ecology and management. In his work, he has examined tropical reef fisheries, community structure, and stock assessment of reef, mangrove and estuarine fishes. His research uses a blend of innovative field, laboratory and analytical techniques, focusing on fundamental and applied issues related to fishes and fisheries that range in scale from individual species to entire ecosystems. His research is tailored to meet current and anticipated management needs which regularly result in management recommendations in the face of increasing climate and anthropogenic impacts.

His research is tailored to meet current and anticipated management needs which regularly result in management recommendations in the face of increasing climate and anthropogenic impacts.

Dr. Acosta has also been on the Board of Directors of the Gulf and Caribbean Fisheries Institute (GCFI) for over 15 years. In addition to serving as the Chairman and Vice-Chairman of GCFI, he is currently Senior Editor of the GCFI Proceedings and chairman of GCFI program committee on which he has served since 2005.

In addition, he is a member of stock assessment technical working groups for State, Federal and Regional agencies; a technical adviser for the University of Puerto Rico Sea Grant Program; an active member of the UN Protocol concerning Specially Protected Areas and Wildlife (SPA) for the Species working group; and a member of the WECAFC Technical working group for fish spawning aggregations.

He holds a Ph.D. in Marine Sciences from University of Puerto Rico, a M.S. in Fisheries, Aquaculture and Pathology from University of Rhode Island, U.S., and a B.S. in Aquaculture and Fisheries Technology from University of Rhode Island, U.S.

**Francisco A. ARIAS-ISAZA**  
Director General  
Instituto de Investigaciones Marinas y  
Costeras  
Marine and Coastal Research Institute  
INVEMAR Colombia



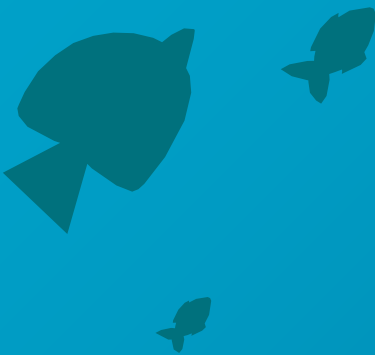
All my career has been devoted to marine sciences. Once I finished my basic studies joined the Navy which in that moment was the main institution conducting oceanographical research in Colombia.

There I was able to develop my research interests as well to prepare myself into other disciplines and administrative skills.

In 1995 the Instituto de Investigaciones Marinas y Costeras (Marine and Coastal Research Institute INVEMAR) responsible for marine and coastal issues was established, and I was appointed as the first General Director through a public call process. I started with only a handful of researchers and a budget of about US\$400,000. Nowadays INVEMAR has 260 persons committed with the development of different lines of research and a budget of 20 Mill USD. INVEMAR has gained a well known national and international reputation as a leading institution especially in Latin American and the Caribbean Region.

In terms of my scientific activities I have been the leader of the Integrated Coastal Zone Research Group of INVEMAR, a multidisciplinary set of individuals that has produced more than 100 publications in the last 15 years. The group has led the conceptual layout of the national policy on coastal management and the different developments that has enriched the sound management of coastal zones in the country, including the establishment of new marine protected areas, the declaration of the Sea Flower Biosphere Reserve, adaptation plans for Cartagena de Indias, San Andres and other coastal cities. Finally I have been supporting negotiations of Colombia in different environmental international scenarios, such as the Biodiversity, Climate Change, Ramsar, and other regional agreements.

**Francisco BRIZUELA-VENEGAS**  
IOCARIBE Vice-Chairperson  
MEXICO



Biologist. He also performed studies on the design of Educational Public Policies. He serves as an advisor in curricular design and in matters of the Intergovernmental Oceanographic Commission (IOC) of UNESCO to the Dirección General de Educación Tecnológica Agropecuaria y Ciencias del Mar, de la Secretaría de Educación Pública (SEP), Subsecretaría de Educación Media Superior de México.

He also serves as Vice Chair of the IOC Subcommission for the Caribbean and Adjacent Regions (IOCARIBE). He was Chairman of that Subcommission and is a member of the IOC Expert Group on Capacity Building and the National Focal Point for Mexico.

He was Director General de Educación en Ciencia y Tecnología del Mar (Ministry of education of Mexico) an institution dedicated to marine education. This system consisted of 36 schools, distributed along the coast of Mexico and in inland waters.

He has been the representative of Mexico in many sessions of the Assembly and Executive Council of the IOC, of IOCARIBE and other Intergovernmental Bodies and Conventions. He has been involved in IOC Programmes and activities for more than 20 years.

## Edgard CABRERA

Executive and International Advisor  
Marine Meteorology, Oceanography &  
Maritime Affairs  
Colombia, Switzerland



I am formally retired from the World Meteorological Organization (WMO) after 13 years as Chief Ocean Affairs Division of the World Meteorological Organization (Geneva), and being responsible for the implementation of the Marine Meteorology and Oceanography Programme.

During my tenure at the WMO, I have been the Secretariat responsible to act as focal point on marine related matters and UN-Oceans and to coordinate with IOC/UNESCO, the International Maritime Organization and the International Hydrographic Organization, and to provide marine safety services - in particular the World-Wide MetOcean Information and Warnings Service (WWMIWS), as part of the Global Maritime Distress and Safety System (GMDSS).

I had also a successful career as naval commissioned officer (retired as senior rank officer in 2004) and oceanographer, serving in technical, scientific, academic, operational and senior positions in the Colombian Navy and National Maritime Authority. My last assignment was as Naval Attaché at the Colombian Embassy in Washington, DC (USA). This experience

strengthened my ability to develop and manage cooperation in international relationships.

After my retirement from WMO, I have performed as register consultant, expert, lecturer with the IMO, UNCTAD, WMO, and the IOC of UNESCO in the programmes / projects related to Hydrology, Meteorology, Climate and Marine activities. Overall, I have an extensive academic background with over 50 published articles and reports, and I have proven experience in maritime and applied marine affairs --including assisting international organizations and governments with marine and environment policy matters, and the implementation or modernization of existing networks--.

I am passionate about oceans and with the understanding of the interactions between ocean, atmosphere, land and climate. Also, I feel I have much to contribute to the development of ways to move “from science to action”, as part of the Sustainable Development Goals of the 2030 Agenda for Sustainable Development set by the United Nations.

**Dr. Edgardo DIAZ-FERGUSON**  
Executive Director and Scientific  
Coordinator Coiba Scientific Station  
(COIBA AIP).



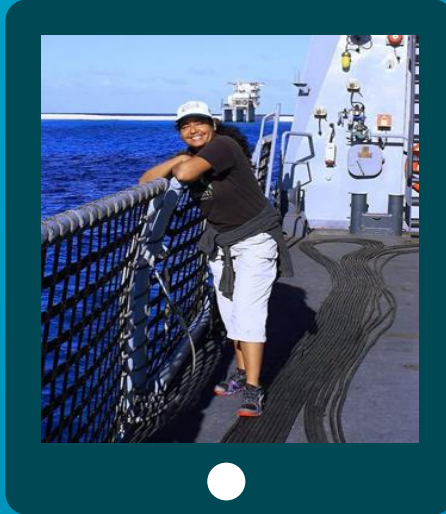
Professional of biological sciences with 19 years of experience in research, education, marine resources management and conservation. Graduated as bachelor of science in biology and zoology from the University of Panama; Master of Science in marine ecology and oceanography from the University of Costa Rica and PhD in animal biology and marine genetics from the University of Cadiz, Spain. Conducted four postdoctoral research experiences in United States: University of Washington, University of Florida, University of Georgia and Auburn University. Project leader and principal investigator in national and international projects related to genetics, coastal management, fisheries and conservation of marine and insular biota. Author of 30 scientific papers and the first book of molecular marine ecology in Spanish. Professor and thesis advisor of the master of science program in marine and coastal resources management of the International Maritime University of Panama (UMIP). Professor and thesis advisor of the master of science program in biological sciences of the University of Panama (UP). Currently, he is the executive director and scientific coordinator of Coiba Scientific Station (COIBA AIP). He is also the General

Secretary of the Latin American Association of Marine Laboratories (ALICMAR) and current President of Latin American Congress of Marine Science (COLACMAR) that will be celebrated in September of 2022 in Panama city, Panama.

#### About Coiba Scientific Station (COIBA AIP)

One of the Public Interest Associations supported by the National Secretary of Science Technology and Innovation of the Republic of Panama (SENACYT). Our main objective is to generate, execute and promote research projects, educational activities and new technologies oriented to protect and study biodiversity and sustainable use of natural resources from insular, coastal and oceanic environments of Panama. Currently our station promotes and executes projects in 14 research areas including: biodiversity, connectivity, ecological processes, ecological restoration, sustainable fisheries, oceanography, limnology, bioprospection, biogeography, evolutionary processes, subaquatic archeology, anthropology, ecosociology and governance.

**Ms. Eva DUBOIS**  
Apoyo Profesional II  
Dirección General de Políticas y  
Conservación de Ecosistemas,  
Ministerio del Poder Popular para el  
Ecosocialismo, VENEZUELA



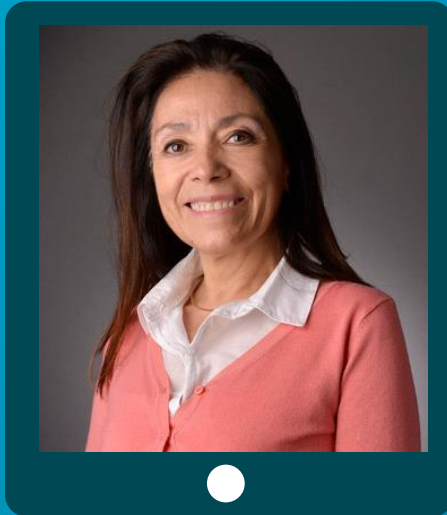
Eva Dubois is a Biologist from Universidad de Oriente in Cumana, Venezuela (UDO 2006). She develops a career since late 90's growing marine phytoplankton in the laboratory of the Oceanographic Institute of Venezuela, teaching biology subjects in the same university as well as environmental education at different levels. She also is a good scuba diver assistant and was Outstanding Student of the University.

Afterward (2007) she enter the Venezuelan Environment Ministry as a professional expert for the conservation of marine protected areas and endangered species where she started to work as specialist of the management of such areas and field coordinator of the Conservation of Sea Turtles Project at the Paria Gulf during a decade. Meanwhile he took several

courses for the handling of nature special regions and wildlife preservation. Actually, she works on Territorial Ordination and management of Ecosystems with particular detail on mangrove forest, coral reef, coordinator of technical work tables to off shore oil exploration and designing security zones for the Venezuelan Navy.

Finally, she feels excellent working with local people and different backgrounds.

**Dr. Elva ESCOBAR BRIONES**  
Institute of Marine Sciences and  
Limnology, Universidad Nacional  
Autónoma de Mexico  
EPG MEMBER



Dr. Elva Escobar is a full time professor in oceanography at Instituto de Ciencias del Mar y Limnología (ICML) UNAM.

She has contributed with new knowledge to deep sea biodiversity conservation and sustainable use through scientific research on board UNAM's Research Vessels and publications in collaboration with national and international institutions.

These results have been used to define policies, design conservation networks and programs in the deep ocean. In

addition she contributes with capacity building programs in oceanography. She is a lead member of the Deep Ocean Stewardship Initiative (DOSI).



**Ms. Sonia Carolina GONZALEZ**  
International Affairs Adviser  
Colombian Ocean Commission  
(CCO)



Sonia González is the international affairs adviser on the Colombian Ocean Commission. She is involved in the government process related to the Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdiction, UN Ocean Conference, and the South Pacific Permanent Commission. The above are associated with education, pollution, fishing, and programs like the Regional Study Program of the El Niño Phenomenon.

She also coordinates from a national level to the international level, issues

related to the United Nations Decade of Ocean Science for Sustainable Development, the Regular Process for Global Reporting and Assessment of the State of the Marine

## Mr. Juan Carlos HERGUERA

Oceanographer and Marine Geologist  
Centro de Investigación Científica y de  
Educación Superior de Ensenada  
(CICESE)



Juan Carlos Herguera is an oceanographer and marine geologist at the Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE). His research interests are the role of past climate variability in ocean circulation and the ocean carbon cycle especially in the Eastern Pacific, from high resolution sediment records, with the goal to understand the emerging trends during the last decades introduced by the anthropogenic driven climate change. During the last decade he has been engaged in studies of the carbon cycle in the water column and recent sediments in the Gulf of Mexico to establish the base line of this large ecosystem and the effects and trends introduced by climate change and large scale hydrocarbon spills. This endeavor has led us to establish a network of several research and higher education institutions in Mexico funded by the National Mexican Research Council for Research and Technology (CONACYT) and the Secretary of Energy (SENER) to carry out a multi-institutional multidisciplinary project carried by the CIGOM Consortium, constituted by nine Mexican research and education institutions with collaborations from another eight Mexican, and six

international oceanographic research institutions. This project has enabled us to establish a network of observational platforms in real time of buoys, high frequency coastal radar stations, gliders and satellite imagery, in the Mexican ZEE of the Gulf. These observations are complemented by the systematic monitoring by 22 cruises that have collected and analyzed water samples, organisms and sediments to establish the biogeochemical and ecological base line of this large ecosystem. This project has also funded an unprecedented effort in the computational modelling of the circulation and biogeochemistry of the Gulf of Mexico to establish the ecological vulnerability under different oil spill scenarios in the GoM. All of this enormous effort to understand the oceanography and ecology of the GoM has been only possible by the concerted effort of numerous experts, postdocs, graduate students and technicians at CICESE and all of the institutions associated with CIGOM as well as the collaborative national and international network developed in the past six years.

## Dr. Lorna Veronica INNISS

Coordinator, UN Environment Programme's Secretariat of the Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region



A national of Barbados, Dr. Inniss has over 25 years of experience in the management of coastal ecosystems in the Caribbean and worked previously as Director of the Barbados Coastal Zone Management Unit. Dr. Inniss holds a Bachelor of Science in Biology with honors from the University of the West Indies (UWI), a post-graduate honors Diploma in Business Administration and Management, a Master of Science degree in Environmental Planning and Management, as well as a Doctorate in Oceanography and Coastal Sciences from Louisiana State University, USA.

Dr. Inniss was the Acting Director of the Coastal Zone Management Unit in Barbados for four years, and Deputy Director for the 10 years prior. She served as the elected Chair of the UN Intergovernmental Coordination Group for the Caribbean Tsunamis and Coastal Hazards Warning System from 2008-2012, and was one of two Joint

Coordinators of a Group of Experts established by the United Nations General Assembly to deliver the first ever Integrated World Ocean Assessment.

Dr. Inniss has been a very passionate public advocate for environmental conservation, focusing on individual and community responsibility for protection of natural resources. She also worked on the identification of special needs of Small Island Developing States, considering that their economic development could be sustained by properly managing their coastal and marine assets.

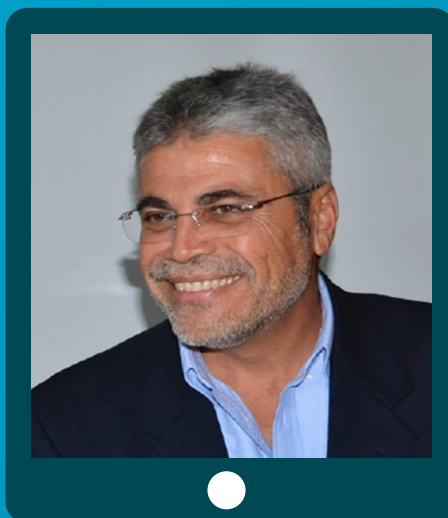
**Mr. Albert MARTIS**  
Second Vice-President of the WMO



Albert Martis has been the Director Meteorological Department Curaçao and Permanent Representative of the Curaçao and St. Maarten with WMO since 2010. From 2008 to 2010, he served as Director Meteorological Services Netherlands Antilles and Aruba and as the Permanent Representative of Netherlands Antilles and Aruba with the WMO. Prior to that, from 2000-2007, Dr Martis was the Chief Climate Research Division at the Meteorological Services Netherlands Antilles and Aruba. Over this entire period (2000 to present), he served in WMO as an expert and member of various task force, committees and commissions - including, the Constituent Bodies Reform Task Force.

After obtaining his Masters in Science degree in Physics at the University of Nijmegen (Netherlands) in 1994, Dr Martis completed his PhD in Atmospheric Physics at the University of Bonn (Germany) in 1998. He has authored and co-authored several publications.

**Professor Julio M. MORELL**  
University of Puerto Rico-Mayaguez  
Director, IOOS-CARICOOS



Julio Morell was born on 1955 in Arecibo and raised in San Juan, both on the north coast of Puerto Rico. As it is common for children in insular regions, he became familiar with the ocean since early on. Watersports including sailing, fishing and diving certainly provided provocation for pursuing a B.Sc. at the University of Puerto Rico-Rio Piedras in Natural Sciences and a MS in Chemical Oceanographer at the University of Puerto Rico-Mayaguez. Other professional training includes being a certified scientific diver and a USCG Master license holder (100t, currently inactive) which allowed for working in a recreational fishing charter vessel and later for assisting with research vessel operations at the University of Puerto Rico.

Fields pursued in his oceanography career include plankton metabolism, marine pollution by oil and debris and the study of tropical marine biogeochemical processes and their role in modulating atmospherically active gases. Professor Morell also participated in interdisciplinary research efforts towards identifying the influence of major river plumes (Orinoco and Amazon) and mesoscale processes, such as eddies and internal waves, on the optical, physical and biogeochemical character of Eastern Caribbean waters. More recent research targets include the

diverse expressions of climate and ocean acidification in our oceanic and coastal surroundings and ocean observing applied science.

Since 2007, Julio M. Morell has served as Executive Director and Principal Investigator of the Caribbean Coastal Ocean Observing System (CARICOOS), a regional component of the U.S. Integrated Ocean Observing System. Prof. Morell's ocean experience made him aware of coastal information needs faced by diverse societal sectors in the Caribbean. For more than a decade, Prof. Morell has focused in the development of CARICOOS with the goal of providing for these needs. This has required continuous engagement of stakeholder sectors and building strategic partnerships with pertinent research, educational, federal, state and private entities that have made CARICOOS a reality (<http://caricoos.org>).

Professor Morell currently serves in several advisory committees including the Puerto Rico Climate Change Council, the UPR Sea Grant program, the Jobos Bay National Estuarine Research Reserve, The Ocean Foundation, the South Puerto Rico Harbor Safety and Security Committee and the IOOS Association.

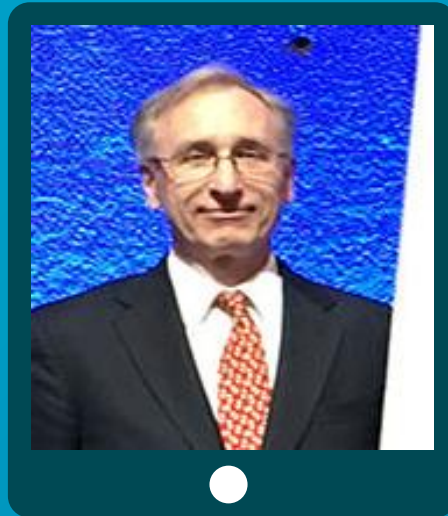
**Dr. Marck ODUBER**  
IOCARIBE Vice-Chairperson  
ARUBA UNESCO National Commission



Marck Oduber is from Aruba. He received his Bachelor of Science degree in Meteorology from the University of Oklahoma, United States of America, in 1998, and a Master of Science degree in Geosciences from the Mississippi State University, also in the United States of America, in 2000. Marck successfully defended his Ph.D. in December 2020. The Ph.D. dissertation's title is "The Impact of Selected Natural Factors on Tourism Demand -The Case of a Small Island Destination-." Marck has been working from 2000 through 2010 at the Meteorological Service of the Netherlands Antilles & Aruba as a research meteorologist. In 2011 the Meteorological Service of Aruba was instituted, and he became the new department director. Furthermore, he has been a project leader in many projects on Aruba on Natural Sciences. He was also the Vice-Chair of the National Climate Change Committee of Aruba and the Sustainable Environment Commission Nos Aruba 2025. Marck is

currently also Aruba's UNESCO focal point for IOCARIBE and Tsunami National Contact. He has been elected Vice-Chair of the IOCARIBE in Cartagena, Colombia, in 2017. Since 2018 Marck has also worked with the Minister of Education, Science, and Sustainable Development as a Program Specialist in Sciences for UNESCO Aruba and is working on different science projects on Aruba. The latter includes organizing the Fifteenth Session of the IOC Sub-Commission for the Caribbean and Adjacent Regions (SC-IOCARIBE-XV) on Aruba in May 2019. He was also the leader of a UNESCO sponsored workshop on SDG14, organized in Aruba in 2017. This workshop looked at a rapid assessment of co-benefits and trade-offs among Sustainable Development Goals pertaining to the Planet, especially SDG14. On behalf of the Minister of Education, Science, and Sustainable Development, Marck is also part of Aruba's SDG committee.

**Mr. Arthur PATERSON**  
IOCARIBE Vice-Chairperson  
International Program Manager at  
NOAA/OAR



Arthur Paterson serves as a Program Manager in NOAA Research's International Activities Office. He also serves as a Vice Chair to IOCARIBE, following participation on the U.S. delegation to IOCARIBE for ten years.

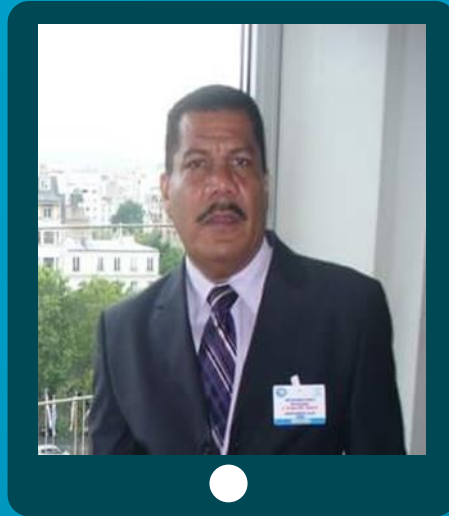
In support of U.S. interests at the IOC since 2004, he facilitates U.S. participation in the UN Decade of Ocean Science for Sustainable Development, 2021-2030. He served on the U.S. and international team to design and launch the International Coral Reef Initiative in 1993-1995, and the first International Year of the Reef.

He served on U.S. delegations to the UNEP Regional Seas Programs in the

Caribbean and Pacific; he was the U.S. technical focal point to the UNEP Caribbean Specially Protected Area and Wildlife program for over a decade helping to expand its program on ecosystem management. Working with U.S. partners such as the IUCN, he helped to organize the Marine Theme of the World Parks Congress in 2003.



**Eng. Arnulfo SANCHEZ-MORALES**  
IOCARIBE Chairman



Engineer Mr. Arnulfo Sánchez Morales was born in the city of Penonomé, Panama. He is the current Chair-Person of the IOC of UNESCO Sub-commission for the Caribbean and Adjacent Regions (IOCARIBE) after serving for two consecutive terms as Vice-Chairperson. Between 2011 and 2013 he worked as Head of the Environmental Division of the Panama Canal Expansion.

He has promoted the development of ocean sciences in the Caribbean region and was the founder of the Environmental Division for the Maritime Authority of Panama. Mr. Sanchez is involved in several regional projects and was also the Chairperson of the Panama Tsunami National Committee until 2019.

Mr. Sanchez is an Engineer on Maritime Economics and Ports with a M.Sc. in Maritime Transport from the Maritime University of St. Petersburg, Russia. He also has experience working for the academia as Professor of Master's Degree for the Universidad del Istmo on "Environmental Management of Ports" and "Social Evaluation and Environmental Impact Analysis."





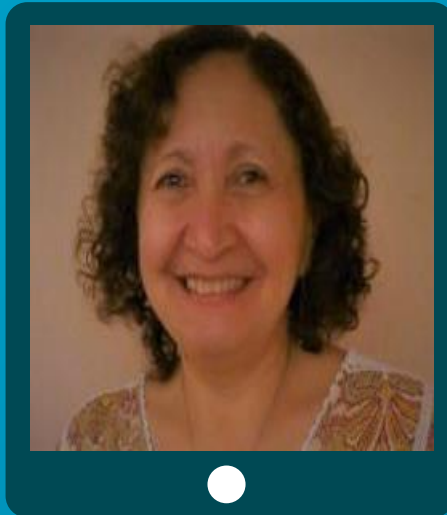
**Dr. Paula Cristina SIERRA-CORREA**  
Head of Research and Information for  
Marine and Coastal Management  
Marine and Coastal Research Institute  
–INVEMAR–, Santa Marta, Colombia.



Since 2000, she is head of Research and Information for Marine and Coastal Management at Marine and Coastal Research Institute (INVEMAR). She is Colombian. PhD on marine ecosystem-based adaptation to climate change. Marine biologist, her MSc on geoinformatics and Coastal Zone Management at ITC – Twente University, The Netherlands. Since 1996 she works at INVEMAR. She was a part of the team that elaborated the coastal zone policy in Colombia. She participated in elaboration, execution and coordination of more than 25 research projects (at least 5 international projects). She was a leader of GEF project “Design and Implementation of Marine Protected Areas Subsystem in Colombia”. Currently she is a leader of European Union Action

on mangroves, seagrasses and local communities at the Caribbean (MAPCO). Since 2015 she is a Coordinator of Regional Training Center for Latin America into the OTGA strategy of IODE-IOC-UNESCO and active research at Caribbean Marine Atlas linked with CLME+ following the state of marine environment at the Caribbean Region. She has expertise in coastal planning and policy options, climate change issues (impacts, vulnerability, adaptation and mitigation). Author of more than 20 scientific publications. Leader of research team with at least 35 people.

**Dr. Soraya SILVA**  
Head Laboratory of Biological  
Sciences, Center of Oceanology and  
Antarctic Studies, Venezuelan Institute  
for Scientific Research (IVIC),.



Soraya J. Silva is an Associated Researcher from the Venezuelan Institute for Scientific Research. She holds a Ph.D. in Oceanography and Coastal Sciences from Louisiana State University (USA), where she studied effects of diesel and Cu-contaminants on the micro phytobenthic community from a saltmarsh, using photosynthetic pigments of different taxa with High Performance Liquid Chromatography (HPLC).

Her research interests are in the area of biological oceanography, with focus on marine ecology, ecotoxicology and phytoplankton dynamics. She has lead several research projects in Antarctic environments and has a broad experience on microalgae culture. She participates in a regional project related to the Strengthening Capacities in

Marine and Coastal Environments Using Nuclear and Isotopic Techniques and she works on a project related to the screening of microalgae and cyanobacteria from different environments for biotechnological applications in the area of environment, health, etc. In addition, she teaches and tutor undergraduate and graduate students and has been involved in activities of training and outreach in coastal communities.

**Mrs. Christa von HILLEBRANDT  
ANDRADE**

Manager NOAA Caribbean Tsunami  
Warning Program International Tsunami  
Information Center  
EPG MEMBER OF THE DECADE



Christa von Hillebrandt-Andrade is the Manager of the Caribbean Tsunami Warning Program of NOAA's National Weather Service in Mayagüez, Puerto Rico. Before joining the NWS in 2010, she was the director of the Puerto Rico Seismic Network for 16 years. Christa's work focuses on earthquake and tsunami hazards, warning systems and readiness and is actively engaged in scientific conferences, capacity building, community outreach and media. She is also the author of dozens of scientific papers. She is a member of the Executive Planning Group for the UN Decade of Science for Sustainable Development, Executive Committee of the International Association of Physical Sciences of the Ocean and the Scientific Board of UNESCO's International Geosciences Programme (IGCP).

She is the past Chair of the UNESCO IOC Tsunami and other Coastal Hazard Warning Systems for the Caribbean Sea and Adjacent Regions and served as President of the Seismological Society of America (SSA). In 2019 she was named Fellow of the American Association for the Advancement of Science (AAAS) and in 2021 she will receive the SSA Frank Press Public Service Award.

She holds a BSc in Geology from the University of Delaware and a Masters in Geology with as Specialty in Volcanology from the Escuela Politécnica Nacional of Quito, Ecuador.

**Mr. Ariel TROISI**  
IOC Chairman

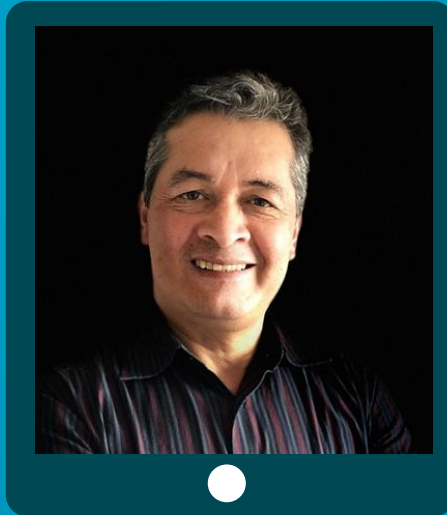


Degree in Physical Oceanography, Instituto Tecnológico de Buenos Aires, MSc degree in Science and Technology Policy and Management, Universidad de Buenos Aires. Joined the Argentine Navy in 1988 as Oceanographer. Longstanding and proactive involvement in marine scientific research, project management and associated services, as well as in the Intergovernmental Oceanographic Commission IOC of UNESCO (including, inter alia, sustained observations, data management, capacity development and transfer of

marine technology,). Technical Secretary of Servicio de Hidrografía Naval, Argentina (2020-). Technical Coordinator of National Commission for the Outer Limit of the Continental Shelf (2012-), Chairperson of the Intergovernmental Oceanographic Commission IOC (2019-).



**Dr. Cesar TORO**  
Head IOC of UNESCO Regional  
Secretariat for IOCARIBE  
Intergovernmental Oceanographic  
Commission (IOC) of UNESCO



Dr. Cesar Toro is the Head of the Subcommission for the Caribbean and Adjacent Regions IOCARIBE of the Intergovernmental Oceanographic Commission (IOC of UNESCO), based in Cartagena, Colombia. Between 2009 and 2015 he was also responsible for the UNESCO Natural Sciences Programme for the Caribbean.

From IOCARIBE he has promoted the development of marine and ocean sciences and technology in the states of the region through the strengthening of institutional capacity, coordination of intergovernmental group and networks of scientists and experts. He coordinates IOC of UNESCO programmes in the Latin American and Caribbean region with those of the organizations of the United Nations system, working actively with

national, regional and international agencies and entities.

Cesar is a physical oceanographer, M.Sc. in oceanography and holds a Ph.D. from the University of Quebec, Canada in Physical Oceanography. Dr. Toro is a specialist in dynamical oceanography and climate change adaptation and mitigation, sustainable development and ocean governance and policy. He also has an extensive experience working for the oil and gas industry, the United Nations, and in project and programme design and implementation, especially in developing countries and SIDS.

