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Fifth Meeting of the Scientific and Technical Advisory Committee (STAC) to the Protocol Concerning Pollution from Land-Based Sources and Activities in the Wider Caribbean.

Virtual

15 to 17 March 2021

## REPORT OF ACTIVITIES OF THE LBS REGIONAL ACTIVITY CENTRES IMA (TRINIDAD AND TOBAGO) AND CIMAB (CUBA) 2019-2020

For reasons of public health and safety associated with the COVID-19 pandemic, this meeting is being convened virtually. Delegates are kindly requested to access all meeting documents electronically for download as necessary.

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## Activity Report 2019 - 2020

# LBS Protocol Regional Activity Center - Centre of Research and Environmental Management of Transport (CIMAB), Havana, Cuba

Project Title and Code	Activity	Date and Host Country	Objectives	Source of Financing	Budget (USD)	Financing provided by RAC-CIMAB (Cuban pesos, CUP)	Recipients/ Participants	Products/ Outputs
Regional Project "Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States" (GEF IWEco Project) National Sub Project: "Conservation and Sustainability of Biodiversity in Cuba through the integrated watershed and	1 National Monitoring Workshop (Component 2 of the GEF IWEco Cuba sub-Project)	June 2019, Cienfuegos, Cuba	To reconcile the Scope and Content of the Environmental Baseline of the four demonstration areas included in the sub- Project.				Those in charge of monitoring the programmes of the four demonstration areas of the project.	Design of the Scope and Content of the Environmental Baseline and approved Activities for 2019 and 2020.
	2 Development of the environmental baseline of the Guanabo River basin (one of the four demonstration areas of the sub- Project).	July - September 2019, Cuba	To compile all existing information on the natural characterization of the Guanabo river basin, with emphasis on the description of the resources to be monitored in the IWEco Cuba sub- Project: water and biodiversity.	GEF IWEco Project sub-Project: IWEco Cuba	76,100.00 (equipment acquisition)	85, 200.00 (co- funding from Cimab)	RAC CIMAB specialists involved with coordination and execution in collaboration with other local institutions.	Environmental Baseline of the Guanabo River Basin Demonstration Area
coastal area management approach" (IWEco Cuba)	3 Participation in the development of the Water Quality Assessment Protocol	October - November 2019, Cuba	To define a Protocol to standardize the technical procedures for the evaluation of surface and marine coastal waters to be studied within the framework of the GEF IWEco Cuba sub-project.				Researchers from the Cienfuegos Center for Environmental Studies (Centro de Estudios Ambientales de Cienfuegos-	Protocol for water quality assessment

	4 Methodology Workshop on Component 2 Indicators of the GEF IWEco Cuba sub-Project	March 2020 Cienfuegos, Cuba	To disseminate the results obtained regarding the Environmental Baseline and the water quality assessment protocol and to define the methodology for sampling (field work).				CEAC) and RAC- CIMAB Those responsible for monitoring the programs of the four demonstration areas of the project	Monitoring Protocol including the definition of assessment indicators and methodology for sample collection
	5 Conduct of water quality sampling (rainfall and coastal) in the Guanabo River Basin Demonstration Area.	November 2020/ January 2021 Havana, Cuba	To assess the water quality of the Guanabo River and the coastal catchment area and compare with previous results.				project. Researchers and specialists from RAC - CIMAB	Report on the water quality of the Guanabo River and coastal catchment area
<b>Regional Project:</b> "Catalysing Implementation of the Strategic Action Programme for the Sustainable Management of Shared Living Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems" (GEF CLME+ Project).	Subregional study (Dominican Republic, Cuba, Mexico, Honduras, Guatemala, Costa Rica, Nicaragua, Panama and Colombia): "Evaluation of nutrient pollution in the Wider Caribbean Region. Sources, impacts, assessment and monitoring. Capacities and challenges".	March - October 2020 Cuba	To contribute to the development of the Regional Nutrient Strategy and associated Action Plan, which aims to establish a collaborative framework for the progressive reduction of nutrient load impacts on marine ecosystems in the Wider Caribbean Region, as a priority goal.	GEF CLME + Project	30 000.00	42 000.00	<i>Participants:</i> Researchers from RAC CIMAB with the collaboration of the LBS Protocol National Focal Points in the countries involved in the sub- regional study.	Evaluation Report on nutrient pollution sources in the countries under study, their impact, and monitoring and evaluation systems in place. The Report also included related challenges.

National Project: "Monitoring the environmental quality of the ecosystem of the bays in Santiago de Cuba, Cayo Moa, Nipe, Puerto Padre, Cienfuegos, Mariel, Varadero-Cárdenas, Guantánamo, Matanzas, Nuevitas and Sagua".	<ol> <li>Compilation of data and research bibliography.</li> <li>Update of the inventory of land- based sources of pollution (LBS) in the ecosystem.</li> <li>Evaluation of the main physicochemical (nutrients, organic matter), bacteriological, biological and organic toxic indicators in the waters of the bays.</li> <li>Analysis and comparison of the results achieved using historical records.</li> <li>Analysis of the effectiveness of the LBS mitigation measures proposed in previous studies.</li> </ol>	February 2019 / December 2020	<ul> <li>To update the LBS inventory for each bay.</li> <li>To evaluate the hydro- chemical and sanitary water quality, the levels of organic pollutants and the level of deterioration of the biological communities in the bays during rainy and low rainfall periods.</li> <li>To evaluate the effectiveness of the proposed corrective measures for each land-based source.</li> </ul>	Ministry of Science, Technology and Environment (CITMA), Cuba.	2019: 2, 600, 000.00 Cuban pesos (CUP). 123, 000.00 Cuban Convertible Pesos (CUC) 2020: 2, 700, 000.00 CUP 125, 000.00 CUC	-	<i>Recipients:</i> Provincial Delegations from the Ministry of Science, Technology and Environment (CITMA), Cuba	Result 1:Reportincluding theupdated inventory ofthe LBS of eachbay.Result 2:Report onthe evolution andcontrol of theenvironmentalquality of themarine ecosystem ofeach bay.Result 3:Report onthe evaluation of theeffectiveness of themeasures proposedfor each land-basedsource for thecontrol andmitigation of thenegative impact onthe coastal zoneunder studyExecutive Summary
<b>Local project:</b> "Comprehensive Environmental Monitoring Plan for the Bahía de la Habana (Havana Bay) and adjacent coastline".	<ol> <li>1 Monitoring of the environmental quality of the water and sediments of the Bay using monthly samplings at a network of established stations.</li> <li>2 Determination of the pollutant load contributed by the main surface streams (Luyanó River, Martín Pérez River and Tadeo</li> </ol>	January 2019 / December 2020	To apply the Comprehensive Environmental Monitoring System to the bay watershed to ensure compliance with the recommendations established in GEF Project RLA-93/G-41 to improve the environmental status of the bay and its tributary watershed.	Bahía de la Habana State Working Group	2019: 210, 000.00 CUP 39, 000.00 CUC 2020: 215, 000.00 CUP	-	<ul> <li><i>Recipients:</i></li> <li>1 Bahia de la</li> <li>Habana State</li> <li>Working Group.</li> <li>2 Government of the Province of La</li> <li>Habana.</li> <li>3 Industrial pollution of sources in Bahia de la Habana.</li> <li>4 Instituto</li> </ul>	<ol> <li>Annual report including the evolution of the environmental quality of the waters and sediments of Bahia de la Habana</li> <li>Annual report including the pollutant load contributed by the main surface currents.</li> </ol>

Stream) using		Nacional de
monthly samplings.	42, 000.00	Recursos 3- Annual report
3 Determination of	CUC	Hidráulicos including the
the pollutant load		(National pollutant load
contributed by the		Hydraulic contributed by
rainwater drainage		Resources rainwater drainage.
that directly affects		Institute)
the quality of the		4- Report on the
bay waters (Agua		pollutant load
Dulce, Matadero		entering the bay
and San Nicolás),		from 10 pollutant
using monthly		sources of industria
samplings.		origin.
4 Annual		
monitoring of 10		
land-based		
pollutants of		
industrial origin in		
the bay.		

#### **Secondary Activities:**

- RAC CIMAB specialists actively participated in the revision of the final version of the "State of the Cartagena Convention Area (SOCAR) Report: An Assessment of Marine Pollution from Land-Based Sources and Activities in the Wider Caribbean Region", which was officially approved during the 4<sup>th</sup> Meeting of the Contracting Parties to the Protocol Concerning Land-based Sources of Pollution (4<sup>th</sup> LBS COP) in June 2019.
- 2. A RAC CIMAB specialist reviewed the "Strategy for the Development of the Caribbean Environment Programme. Period 2020 2030", a document that will guide the work of the Secretariat of the Cartagena Convention for the next ten years.
- 3. Participation in the review of the Terms of Reference of the new Open-Ended Working Group on Monitoring and Assessment (OEWG) of which RAC CIMAB is an active member.
- 4. The Director of RAC CIMAB and the specialist in charge of CIMAB's activities at the Regional Activity Center (RAC) participated in the following meetings:
  - 10<sup>th</sup> Meeting of the Contracting Parties to the Protocol Concerning Specially Protected Areas and Wildlife (SPAW COP10), 3 June 2019;

- 4<sup>th</sup> Meeting of the Contracting Parties to the Protocol Concerning Pollution from Land-Based Sources and Activities (4<sup>th</sup> LBS COP), 4 June 2019;
- 15<sup>th</sup> Meeting of the Contracting Parties to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region from 5 June 6 June 2019.

Participation in the first meeting was as observers. In the last two meetings, participation was at the level of delegates, where the main activities carried out by RAC CIMAB in the 2017 - 2018 biennium were presented. They also participated in the discussions on the Work Plan and the Budget for the next biennium, as well as in a series of bilateral meetings with regional organizations and institutions with the prospect of participation in regional activities and projects. As part of the side activities of the meetings, the outgoing director of the RAC CIMAB Antonio Villasol Núñez, was recognized for his more than 30 years of collaboration with the UNEP Caribbean Environment Programme (UNEP-CEP).

- 5. The curricula vitae of several RAC CIMAB specialists were submitted for membership of GESAMP (Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection).
- 6. A virtual meeting was held with the Secretariat of the Cartagena Convention and with the Focal Points of the Protocol Concerning Land-Based Sources of Marine Pollution (LBS) to review the main activities for the 2019-2020 biennium and to present the draft work plan for the 2021-2022 biennium (July 2020).
- 7. Within the framework of the GEF IWEco Regional Project, a survey was conducted on the RAC CIMAB Testing Laboratory in order to learn about the services it provides, its strengths, as well as its main training and/or equipment needs (October 2020).
- 8. RAC CIMAB participated in the review of the terms of reference for the selection of the consultant for the preparation of the Regional Nutrients Strategy (November 2020).
- 9. RAC CIMAB participated in a teleconference organized by the GEF IWEco Project on the "LBS Protocol: Catalyzing Regional Cooperation to Combat Marine Pollution". During the teleconference, RAC CIMAB presented its main areas of work and the main projects worked on in collaboration with the Secretariat of the Cartagena Convention (November 2020).
- 10. In the 2019-2020 biennium, RAC CIMAB participated in the teleconferences of the "Open-Ended Working-Group on Monitoring and Assessment" (OEWG) of which RAC CIMAB is a member.

# Activity Report 2019 - 2020

# LBS Protocol Regional Activity Center – Institute of Marine Affairs (IMA), Trinidad and Tobago

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
Preparation of State of the Marine Environment Report for Trinidad and Tobago	Preparation of report based on DPSIR framework; Printing of report; Official launch.	Ongoing- June 2020	To prepare and make report available to a diverse range of stakeholders highlighting environmental concerns leading to mitigation actions towards environmental preservation and conservation.	Government of Trinidad and Tobago	12,000		Trinidad and Tobago, IMA	State of the Marine Environment Report 2020 for Trinidad and Tobago. Newspaper articles Policy Brief
National Coastal Conservation Programme: Long Term Environmental Monitoring and Assessment in Trinidad and Tobago	On-going water, water quality monitoring. Parameters include, physiochemical (pH, temperature, Dissolve oxygen, salinity, turbidity) nutrients (ammonia, nitrites, nitrates, reactive and total phosphates), total suspended solids, chlorophyll a, and , hydrocarbons.	Sampling conducted during the dry and wet seasons in 2019/2020 at 12 sites within the Gulf of Paria, Trinidad.	Monitoring programme established to provide timely and continuous data and information on the environmental status and impacts on Trinidad and Tobago so as to effect policy changes/making for the improvement in the quality of life of citizens and preservation of our natural environments. To assess the contribution of land- based sources of	Government of Trinidad and Tobago	10,000		Trinidad and Tobago, IMA	Data used towards producing a State of the Marine Environment Report 2020 for Trinidad and Tobago. Research Reports Water quality data for future SOCAR reports.

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
			pollution in Trinidad					
Bacteriological Water Quality at Popular Recreational Water-Use Sites in Trinidad and Tobago	Bacteriological Water Quality Surveys at popular bathing beaches on the east coast and west coast of Trinidad.	Bacteriological Water Quality Surveys during the wet and dry season of 2019 - 2020.	To identify possible sources of sewage contamination for beaches surveyed for mitigation measures. To provide data and information to safeguard public health from risk of illness and infectious disease. To ensure representative bacteriological water quality data is obtained at popular beaches	Government of Trinidad and Tobago	10,000		Trinidad and Tobago, IMA	Data used towards producing a State of the Marine Environment Report 2020 for Trinidad and Tobago. Research Report- 'Bathing Beach Water Quality along the Chaguaramas Peninsula' Water quality data for future SOCAR reports.
Monitoring of coral reef and seagrass beds in Trinidad and Tobago	Coral reefs in Tobago are monitored annually to determine changes in % coral cover. Productivity and biomass of seagrass beds at selected sites in Trinidad and Tobago are monitored 2 times per year.	Coral reef monitoring on Buccoo Reef began in 1992. Monitoring of other reefs began in 2008 and is on-going. Seagrass monitoring commenced in 2002 and is on- going.	To monitor ecosystem health and determine impacts from land- based sources of pollution and climate change. To conduct an integrated baseline assessment of coral reefs around Tobago using environmental (physical and chemical), ecological and socio-economic	Government of Trinidad and Tobago	20,000		Trinidad and Tobago	Coral Reef Health Report Card Data used towards producing a State of the Marine Environment Report 2020 for Trinidad and Tobago. Research Reports. Water quality data for future SOCAR reports.

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
	Water quality sampling (nutrient, TSS, chl A, bacteria) is conducted at 12 sites in SW Tobago twice per year. Water quality sampling at 4 sites along the NW peninsula of Trinidad is collected 2 times per year. Maintenance of 2 Coral Reef Early Monitoring System (CREWS) installed in 2013. Planning and installation of new CREWS system based on NOAA and 5C's initiative. Outfitting of new instrument with water quality probes.	Water quality monitoring in Tobago and at seagrass sites in Trinidad commenced in 2006 and is on- going. Ongoing On going	indicators of reef health. To provide timely and continuous data and information on the environmental status and impacts of Trinidad and Tobago so as to effect policy changes/making preservation of our natural environments. To monitor coral reefs systems for detection of environmental conditions linked to degradation and risk to coral reef health.		20,000 For water quality Sonde purchase only.			Data on ecosystem health that is shared with Management Agencies such as THA. Data on ecosystem health that is shared with Management Agencies such as THA.

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
CLME+ Ecosystem Based Management Component- Implementation of an Ecosystem- Based Management (EBM) approach for addressing the Impacts of Land-based Sources of Pollutants on Critical Coastal Habitats such as Mangrove Swamp.	<ul> <li>1.0 Arrange meeting with key stakeholders to identify and prioritize polluted areas with the Caroni Wetland to be addressed. Meetings will be held with fishers, including crab and oyster catchers, both recreational and commercial, who utilize the swamp and surrounding marine area. They will be made aware of the project, the potential hazards and expected output.</li> <li>1.2 Review all past and current studies being conducted in the Caroni Swamp to establish baseline conditions for water, sediment and biota quality. The project site is the Guyamare/Cunupia watershed that feeds into the Caroni Swamp.</li> </ul>	January –March 2018 March –August 2018. Sampling of nutrients was completed at 17 sites for a dry season sampling (2019) and wet	To determine baseline water, sediment and biota quality in the southern section of the Caroni Swamp To identify and document agricultural activities and practices, and unplanned development in the Guayamara and Cunupia sub- watershed that maybe impacting the southern section of the Caroni Swamp. To identify and implement possible (community-based) interventions to reduce the impacts of these activities on the Caroni Swamp Use indicators to monitor and evaluate the efficiency of interventions/measures implemented.	UNEP CEP SSFA	Total 70,000	59,006	Institute of Marine Affairs, Trinidad and Tobago UWI St Augustine	Contribution nationally towards pollution reduction and abatement in the Cunupia/Guayamare watershed and regionally towards conservation and preservation of coastal mangroves and wetlands within the NBSLME. Promotion of Ecosystem-Based Management (EBM) in the Wider Caribbean. Stakeholder meetings report. Data on oyster, crab and fish quality. Maps of farms and farming practices and built development (Plan and Unplanned) within the Cunupia and New Guayamara catchments. Knowledge on farming practices and the use of chemical fertilisers/ chemical

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
	<ul> <li>2.1 Measure and account for the sources, transport paths and fate of nutrients in the swamp.</li> <li>2.2 Conduct a bacteriological assessment of the mangrove oyster (C. rhizophorae).</li> <li>2.3 Determine heavy metal concentrations in the blue land crab (Cardisoma guanhumi) harvested for human consumption.</li> <li>2.3 Conduct testing of fish and shrimp for persistent organic pollutants (POPs) and pesticides.</li> <li>3.1.1 Identify and map all farmers/farming areas/farming</li> </ul>	season sampling (2019) at the Cunupia/Guaya mare study site. Report completed October 2020. June 2018						Minimum of 4 training workshops for farmers. Demonstration farming sites using alternative practices to fertilise soil and treat with pest. Farmers awareness of good agricultural practices (proper use of pesticides, fertilizers etc), alternatives to these chemicals, and pollution concerns/ hazards associated with their use. Community actions documented and displayed through different media.
	associations in the Caroni River Basin. Stakeholder meetings will be held with groups in	collected October 2020 for testing.						

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
	the targeted area to determine interest/ willingness to participate in the project. The project site is the Guyamare/Cunupia watersheds that feed into the Caroni Swamp. 3.1.2 Design and execute survey instrument to gain knowledge on major crops, soil health, pests and diseases and existing farming practices and usage of chemicals practices - application of pesticides and fertilisers. 3.1.3 Based on survey data, training and sensitization workshops will be designed and executed for the farmers on (i) judicious use of pesticides and fertilizers (ii) alternatives in the management of	July 2018 to August 2019						

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
	economically important pests and diseases in the area. These workshops will be facilitated by UWI. 3.1.4 Demonstration site will be established to show	Farmers training workshops, one in March and two in April 2020.						
	the use of alternatives in the selected crop through field trial against high application of pesticides and fertilizers.							
Regional Nutrient Reduction Strategy and Action Plan. The UNDP/GEF CLME+ Project "Catalysing Implementation of the Strategic Action Programme for	Preparation and execution of questionnaire to National Focal Points under IMA RAC to collect country data on nutrient management / issues. Literature research, collation and review	March –April 2020.	To contribute to the development of the Regional Nutrient Strategy and Action Plan for the reduction of impacts from excess nutrient loads on priority marine ecosystems in the Wider Caribbean Region (WCR).	UNEP CEP SSFA	50,000		Institute of Marine Affairs, Trinidad and Tobago LBS Focal Points	Regional Nutrient Reduction Strategy and Action Plan that will contribute regionally towards nutrient pollution reduction and abatement. Policy towards maintaining healthy ecosystems and
the Sustainable Management of Shared Living Marine Resources in the	and determination of content for chapters. Drafting of sub- regional report on Chapters 2, 3 and 4.	March –May 2020	To expand the baseline developed under the State of Convention Area (Pollution) report and identify most					associated fisheries in the CLME <sup>+</sup> region.

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
Caribbean and North Brazil Shelf Large Marine Ecosystems" in conjunction with the Regional Coordination Unit of the Caribbean Environment Programme/Cart agena Convention Secretariat (UNEP CAR/RCU)	Procurement of consultant for development of Chapter 5. Integration of sub regional reports from RAC –IMA, RAC-CIMAB and Federal PARA University by consultants. Production of final report on Regional Nutrient Reduction Strategy by consultants.	June –July 2020 July–August 2020 Ongoing - October 2020 Ongoing - October 2020	important "regionally relevant" pollution sources in terms of the transboundary nature of both sources and impacts; To identify high priority areas for further action based on most affected ecosystem types and most important socio- economic impacts; To contribute to the operationalization of the Caribbean Platform for Nutrients Management; To assist in defining new areas of research relating to nutrient pollution in the Wider Caribbean Region.					
Integrated Environmental Incident and Lion fish Mobile Application and Software Solution	Creation of a Lion fish app for acquiring lion fish numbers and abundance as well as and environmental information	January 2020 to October 2020	Creation of a Lion fish app that will also be used to report on environmental incidents and conditions on oil spills, chemical spill, algal blooms and forms of pollution detrimental to the environment.		20,294		Institute of Marine Affairs, Trinidad and Tobago	A mobile application through which regional stakeholders can download and report sightings of lion fish and report environmental data for use in environment management.

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
								Maps of environmental incidents and conditions. Data on state of the environment.
ISO/IEC 17025 Laboratory Accreditation	To gain ISO/IEC 17025 accreditation for the scope- nitrates and nitrites	Jan 2020- ongoing	Conduct GAP Analysis. Based on the GAP analysis the following activities were undertaken: Development and update of procedures. Development and update of forms for record keeping. Training of staff. Meeting with department personnel to communicate all processes. Briefing lab staff about changes made to any document. Procurement of Goods associated with the ISO process: storage space, CRMs etc.	Government of Trinidad and Tobago	25,000		IMA	ISO/IEC 17025 Laboratory Accreditation for scope Nitrates and Nitrites

Project Name and Code	Activity	Date of Activity	Objectives	Source of Funds	Budget (USD)	Estimate of "in kind" Contribution of RAC-IMA (TT\$)	Recipients/ Participants	Outputs
			Application for assessment Pre-assessor evaluation. Correction of non- conformities. Final Assessment for accreditation. Preparing site facilities for implementation.					

#### **Related Activities:**

#### 2019-2020

- 1. Support to UNEP Cartagena Convention Secretariat: Participated in review of the SOCAR Preliminary draft and Socioeconomics chapter Internal Review Check on 17<sup>th</sup> January 2019. Provide review and comments to the Draft State of Convention Area Report (SOCAR) for the Wider Caribbean Region to UNEP CEP. Provided response to UNEP CEP on the document "Information paper on Expanded Role of LBS RACs and RAN for LBS COP and IGM on 14<sup>th</sup> May 2019. Teleconference via Skype with UNEP CEP to discuss the Regional Nutrients Reduction Strategy on 23<sup>rd</sup> July 2019. Provided comments on 3<sup>rd</sup> July 2019 on the document "A Permanent Policy Coordination Mechanism (PPCM) and Sustainable Financing Plan for Ocean Governance in the Wider Caribbean Region CLME+". Teleconference via Skype with UNEP CEP to discuss Regional Nutrients Reduction Strategy on 23<sup>rd</sup> July 2019. Technical Review of Contribution by RAC REMPEITC-Caribe to the State of Cartagena Convention Area report during the week of 2<sup>nd</sup> February 2019. Participated in Skype teleconference on GEF CLME+ Ecosystem-Based Management (EBM) Pilot Project with UNEP CEP and Guyana and Suriname on 24<sup>th</sup> March 2020. Participated in teleconference on virtual Nutrients Meeting (GEF CLME+ EBM RNS) with UNEP CEP, RAC CIMAB and Prof. Fenzl of Para University, Brazil on 30<sup>th</sup> April. Participated in teleconference with Prof. Mahon based on discussion points for the CLME+ UNEP CEP on 9<sup>th</sup> April 2020 to discuss the work of RACs and the development of the work plan.
- 2. Participated in the second Joint virtual Meeting of the Global Partnership on Nutrients Management (GPNM) and Global Wastewater Initiative (GWI) on 10<sup>th</sup> June 2020.
- 3. Participation in Kick-off Meeting Consultancy Regional Nutrient Strategy and Action Plan for the Wider Caribbean Region on Monday 12<sup>th</sup> October 2020 with UNEP CEP, consultants, via Zoom.
- 4. Participation in virtual meeting of Contracting Parties to the LBS Protocol on Thursday 30<sup>th</sup> July 2020.
- 5. Participation in Caribbean Challenge Initiative (CCI) and the Caribbean Biodiversity Fund (CBF) 5<sup>th</sup> CCI-CBF Week. Participation in panel discussion on nature-based solutions, session 1: Nature's Role in the COVID-19 Recovery Pathway, on July 14.
- 6. Participated in teleconference call with UNEP CEP and working group members of the LBS Protocol on 9<sup>th</sup> May 2019. Participated in Skype teleconference on LBS working group with UNEP CEP on 26<sup>th</sup> March 2020.
- 7. Participated in The Blue Economy Virtual Workshop #1: The Imperative of Ocean Exploration. Hosted by the Inter-American Development Bank. 10<sup>th</sup> October 2019.
- 8. Participated in Blue Economy Caribbean 2019 A Leadership and Transformation Event. Hosted by the Caribbean Development Bank (CDB), the Government of Canada and the Inter-American Development Bank (IDB). 15<sup>th</sup> October 2019, Miami, Florida.
- 9. Participated and attended (1) Tenth Meeting of the Contracting Parties (COP) to the Protocol Concerning Specially Protected Areas and Wildlife (SPAW) in the Wider Caribbean Region 3<sup>rd</sup> June 2019; (2) Fourth Meeting of the Contracting Parties to the Protocol Concerning Pollution from Land-Based Sources and Activities in the Wider Caribbean Region (LBS) 4<sup>th</sup> June 2019; (3) Eighteenth Intergovernmental

Meeting on the Action Plan for the Caribbean Environment Programme  $-5^{th} - 6^{th}$  June 2019; and (4) Blue Economy Summit,  $6^{th} - 7^{th}$  June 2019, Roatán, Honduras.

- 10. Participated and attended High-Level Dialogue on Marine Litter and Waste Management in the Caribbean Region, Best Western Belize Biltmore Plaza, Belize City, 4<sup>th</sup> 6<sup>th</sup> September 2019.
- 11. Participated in First meeting of the Upstream Effluent Management Working Group, 14<sup>th</sup> February 2020, Environmental Management Authority, 8 Elizabeth Street, St. Clair, Trinidad and Tobago.