



## International Waters: Learning Exchange and Resource Network (IW:LEARN)

### Twinning Exchange Experience Note

#### THE FIRST INTERNATIONAL AMAZON -CARIBBEAN WORKSHOP FOR SCIENTIFIC COOPERATION

Belém, Brazil  
May 07-13 -2017

**SEMANA DE COOPERAÇÃO CIENTÍFICA INTERNACIONAL AMAZÔNIA-CARIBE**

ORGANIZAÇÃO:

APOIO:

PROGRAMAÇÃO:

INFORMAÇÕES: [HTTP://BEST-AMAZONIA.BLOGSPOT.COM/BR](http://best-amazonia.blogspot.com.br)

**BELÉM,**  
**7 A 13 DE MAIO 2017** | LOCAIS: AUDITÓRIO DA OAB  
E AUDITÓRIO RAIMUNDO NEY SARDINHA (CESUPA) PROGRAMAÇÃO SUJEITA A ALTERAÇÃO

LOGOS: FIA, CIRS, ceiba, Fapespa, gef, UN, IW, LC25, etc.

WORKSHOP PREPARATÓRIO COFECUB-CAPES: TERRITÓRIO E BIODIVERSIDADE  
II OFICINA TEMÁTICA SOBRE A PROTEÇÃO AMBIENTAL NA AMAZÔNIA  
I WORKSHOP INTERNACIONAL AMAZÔNIA CARIBE DE PROJETOS GEF  
II SEMINÁRIO INTERNACIONAL DE COOPERAÇÃO CIENTÍFICA: ESTUDOS PLURIDISCIPLINARES SOBRE A BIODIVERSIDADE AMAZÔNICA

## 1.1 Participation

ORGANISATION	ADDRESS
CARPHA - Caribbean Public Health Agency	Saint Lucia
INVEMAR	Santa Marta
IMA - Institute of Marine Affairs	Trinidad and Tobago
CIMAB - Centro de Ingeniería y Manejo Ambiental de Bahías	La Habana, Cuba
SPAW-RAC - Regional Activity Centre for Specially Protected Areas and Wildlife	Guadeloupe
CERMES - UWI Centre for Resource Management & Environmental Studies	Barbados
FAO - Food and Agriculture Organization	Trinidad and Tobago
GWP-C Global Water Partnership-Caribbean	Trinidad and Tobago
CLME+ Project (UNDP/GEF)	Cartagena, Colombia
UNEP-CAR/RCU	Jamaica
UNEP - Ecosystems Division	Nairobi, KENYA
UNEP Task Manager Global and Latin America	Washington, DC
UFPA	Brazil
UFOPA	Brazil
UF-Amapá	Brazil
GIZ – German Cooperation	Germany
LCSS- Laboratoire Caribéen De Sciences Sociales	Martinique
Université Paris 1	France

## 1.2 Workshop Objectives

- **Exchange of information and experiences** between Amazonian and Caribbean experts related to: (i) ongoing GEF- and other projects in the region, (ii) representatives of UN Environment and other regional and international organizations about the impacts of sediment/nutrient transport from the Amazon Basin to the Caribbean Region, and the impacts of CC (sea level rise) on the coastlines of the region.
- **Design the draft of an Amazon - Caribbean joint (twinning) project proposal** for implementing an integrated planning and management approach for coastal and marine areas of Amazon-Guyana-Caribbean region influenced by sediment and nutrient output from the Amazon Basin and rising sea levels as a result of climate change.

## 1.3 Workshop Outcomes/ Outputs

- Mutual learning and enhanced common understanding of the production, transport, deposition and impacts of sediments and nutrients from the Amazon basin in the Caribbean region.

- The partner organizations and projects will benefit through the development and implementation of a common Amazon-Caribbean collaborative/joint program based on a priority list of projects to bridge knowledge gaps and to adapt to the impacts of sedimentation and nutrient flows into the Caribbean and North Brazilian Shelf Large Marine Ecosystem regions. Although, the WS will have a supportive effect on the implementation of the Caribbean SAP and other similar projects.
- The outputs of the workshop are:
  - (i) The draft of a Project proposal focused on *COASTAL ENVIRONMENT, SEDIMENTATION AND CLIMATE CHANGE – planning and management of coastal areas and marine ecosystems of the Amazon-Guyana’s-Caribbean region*
  - (ii) Implementation of a coordination committee to develop and submit the project proposal to international donors.
- The proposed Workshop and the future project proposal outputs are building up on activities developed and/or implemented by:
  - (i) The GEF-Amazonas project<sup>1</sup>, such as: *Sedimentation rates of the Madera and Solimões Rivers; Sea level rise in the Amazon Delta; Coastal protection using soft technology* (Suriname)
  - (ii) The GEF funded CLME project<sup>2</sup>, which related the impacts of amazon sediments and nutrients on Caribbean coral reefs and fish stock,
  - (iii) And projects such as: GEF-IWCAM, GEF-IWEco, GEF-CReW. The Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA), activities supported by the GIZ and others dealing with integrated watershed and coastal zone management, marine spatial planning and pollution prevention, reduction and control..

#### 1.4 The Results

The result of the workshop is a first draft concept of a Project proposal, which includes three regions of the American continent: the Amazon Basin, The Northern Coast of South America and the Caribbean Basin.

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<sup>1</sup> The Project GEF-Amazonas “*Integrated and Sustainable Management of Transboundary Water Resources in the Amazon River Basin Considering Climate Change and Variability*” which is financed by GEF, implemented by UNEP and executed by the Permanent Secretariat of the Amazon Cooperation Treaty Organization (PS/ACTO)

<sup>2</sup> The actually submitted CLME+ Project “*Catalyzing Implementation of the Strategic Action Program for the Sustainable Management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystem*” which covers the Caribbean Large Marine Ecosystem (CLME) and North Brazil Shelf Large Marine Ecosystem (NBSLME) is building on the achievements of the GEF funded CLME project.

**Title: FROM THE AMAZON BASIN TO THE CARIBBEAN SEA**  
**Moving forward in managing the impacts of climate change and amazon sediment/nutrient discharge and building resilience of vulnerable coastal ecosystems and communities.**

**PROJECT LOCATION**



**COMPONENTS**

**Component 1: Understanding the dynamics and characteristics of water, sediment and nutrient discharge of the Amazon Basin into the Atlantic Ocean.**

- Physical quantitative characterization of the Total Amazon Discharge of water, sediment and nutrients into the Atlantic Ocean (during the dry and rainy seasons)
- Bio-geochemical characterization of water, sediments and nutrients discharged into the Atlantic Ocean (during the dry and rainy seasons)
- Identification of the pollutant content in the sediment and water discharge
- Differentiation between the discharge characteristics of the Orinoco and the Amazon
- Identification of the geographical distribution and deposition dynamics of the sediment and nutrient flows on the North Brazilian - South Caribbean Shelf and Caribbean Sea.

**Component 2: Understanding the socioeconomic and ecosystemic impacts of sediment and nutrient deposition in coastal and shelf regions from the Amazon Delta to the Caribbean Sea**

- Assessment of economic impacts on: agriculture, fishing activities, fluvial transport, harbor maintenance, tourism,

- Assessment of social impacts on: water quality, public health, housing, relocation of affected population,
- Assessment of endangered ecosystems and species

**Component 3: Development of an Integrated Watershed and Coastal Management Plan (IWCMP) and enhancing governance and institutional performance through innovative policy interventions and evidence base building**

- IWCMP considering (i) the dynamics of changing coastlines and sediment deposition, safe water management, rehabilitating of degraded areas and coastal vegetation; (ii) building sustainable adaptation for coastal communities; waste management; tackling socio-economic issues; etc.
- Recommendation/Action plan for mitigation – watershed/riparian zone rehabilitation; planning innovative interventions
- Governance effective management framework – involve CSOs, technical experts, policy decision makers – strengthening existing committees
- Evaluate and strengthen policies, regulations and land use management plans (property rights and legalized access of natural resources)
- Inclusion of CLME+ SAP implementation experience in the governance plan
- Education planning (*regarding plastic and waste issues*) and community involvement for inland and sea coastal communities
- Communication and outreach activities

**Component 4: Strengthen the resilience of communities and ecosystems to address climate change, identifying impacts and implementing strategies for mitigation and adaptation.**

- Risk assessment and establishing early warning systems for climate change linking the project regions (*building on existing experiences of different projects and partners – IOC GOOS program; 5C. GEF-Amazon, etc.*)
- Mangrove rehabilitation (quantify CO<sub>2</sub> reduced/avoided by protecting mangrove from the impacts of sedimentation and sea level rise)
- Targeted adaptation plans (e.g. security zones – protected areas with no construction)
- Building sustainable infrastructure for floodplains (communities) – for e.g. elevated platforms to maintain economic production and livelihood protection during the flood periods (based on cost benefit analysis considering relocation or maintenance of local population)
- Natural infrastructure including nature based solutions (*building on experience from GEF-Amazon and others*)
- Ecosystem based adaptation approaches – e.g. mangrove restoration, coral reef restoration, wetland management, fisheries management, reforestation along the rivers to address erosion etc.

**1.5 The Meeting and Field Visit**

The Workshop got great attention and support from the Government and the Organization of the lawyers of the State of Pará and from the regional media.

During the last two days the members of the Workshop visited the interface Amazon-Atlantic at the Island Algodoal, located in a so-called Protected Area (APA), where the participants had the opportunity to visit the mangroves and to assist a lecture of the APA supervisor.

### The Workshop



### The members of the Workshop



### The visit in the Mangroves



### The participants of the WS during the lecture about the APA





## Amazon meets the Atlantic



## The beach of Algodaal

