



COHERENS, ecological and hydrodynamic model for estuarine and oceanic circulation in Benin

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IRHOB PRESENTATION

- Laboratory of Marine and Coastal Hydrology
- Laboratory of Living Aquatic Resources
- Laboratory of Social and Economic Studies

Current projects

- Monitoring of Beninese marine and coastal environment (buoys and sensors)
- Monitoring of coastal and marine biodiversity (specimen collecting)
- Study of commercial fish species of the Beninese continental shelf
- Monitoring of cetaceans (whales and dolphins) of the Beninese coast
- Development of local aquaculture feed at a lower cost and performing
- Study and valorization of stranded seaweeds (*Sargassum flutans*)

Context

- ✓ **Threats to the marine and coastal environment**
- **Coastal erosion** (10 m per year) - Construction of dikes but reduced efficiency. The IRHOB wants to forecast the waves
- **Land-based pollution**, plastic bags, illegal transport of fuels
- **Destructive fishing** techniques (gear) participate in the decrease of resources
- **Cetaceans** (dolphins and whales) and **sea turtle** caught accidentally
- ✓ **All this phenomena have to be explained by simple methods**

CEBioS collaboration

- First contact in February 2016 in Cotonou and formulation workshop of the 1st phase of the collaboration in June 2016 at IRHOB.
- Research Title: "Application of the COHERENS model for the protection of the Beninese coastal marine environment"
- Pilot project for two years (2016-2017)

Project Objectives

Academic Objective

Improve knowledge on the use of marine management tools



Specific Objective

Knowledge of the COHERENS Hydrodynamic Model and its applications in the context of the Beninese coastline

Development Objective

Capacity building of researchers and other stakeholders in decision-making for the protection of Benin's coastline



Specific Objective

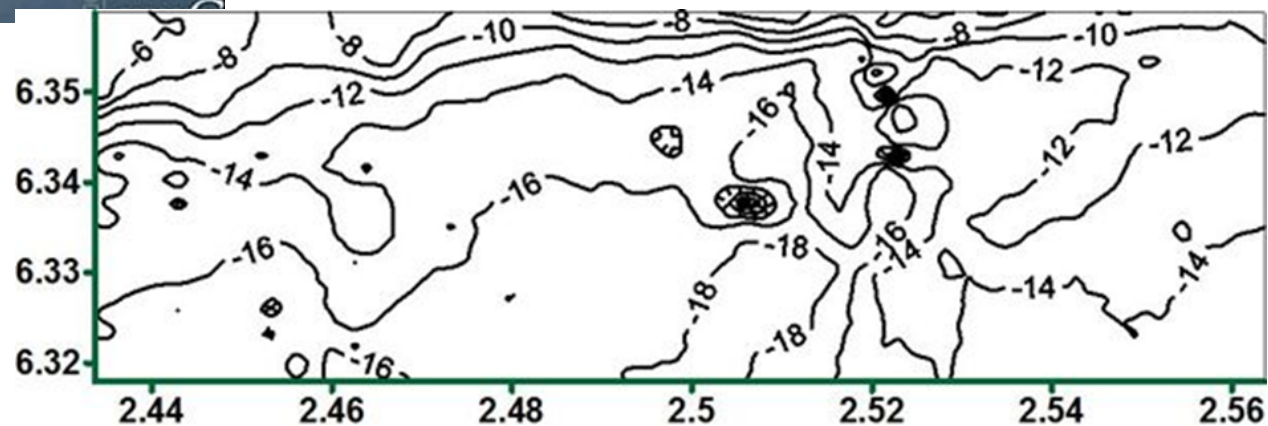
Issue an opinion to help managers in decision making in the event of an oil spill incident on the Beninese coastline

Input data collection for COHERENS model



Benin Coastal Zone

Bathymetry data

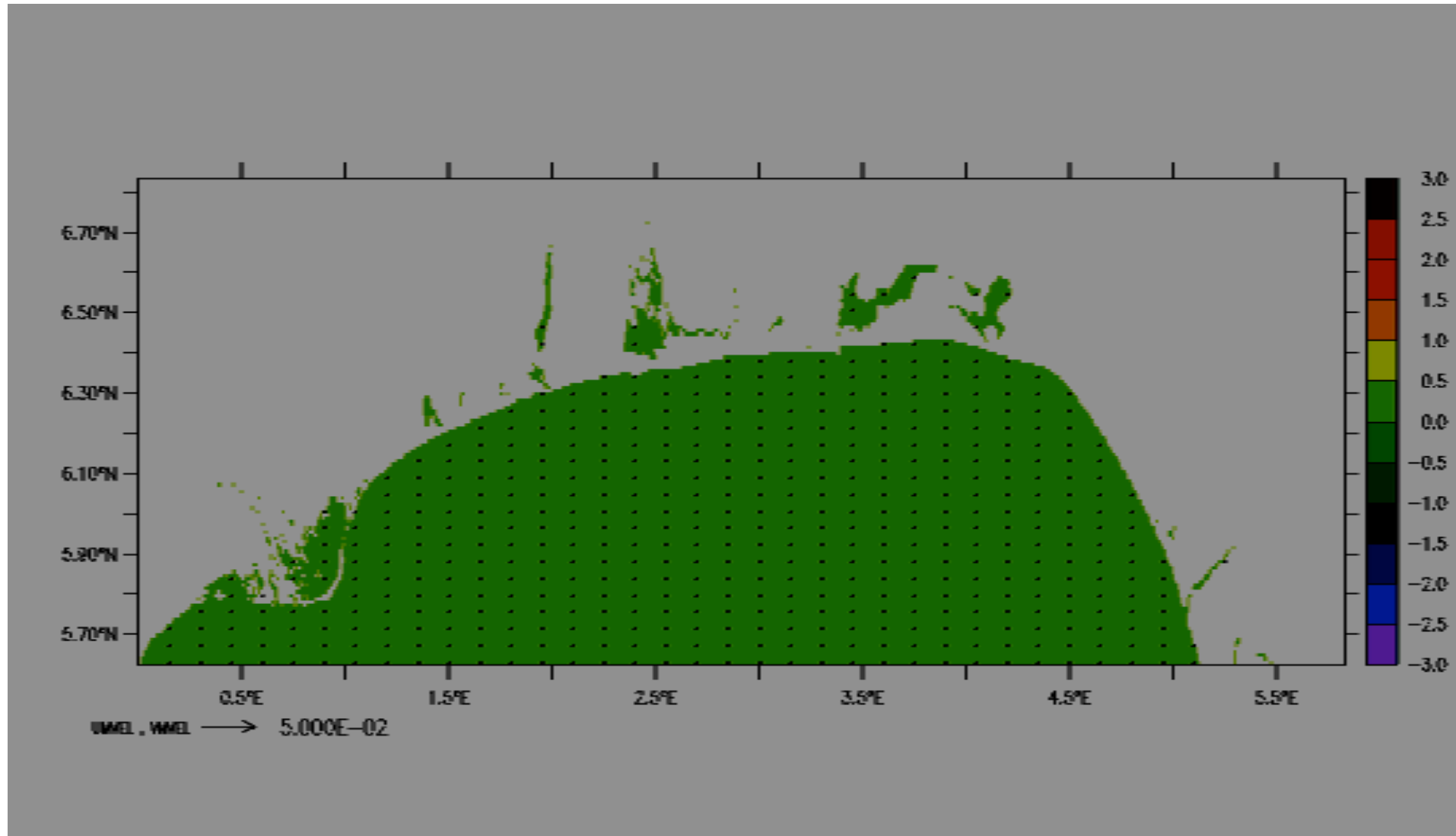


Training course on COHERENS model



11-29 September 2017 at IRHOB

Products of training course (current data)



Restitution workshop at the end of the training course



Other activities with CEBioS

Awareness activities: World ocean day 2017



Ministère de l'Enseignement Supérieur et de la Recherche Scientifique (MESRS)

Centre Béninois de la Recherche Scientifique et de l'Innovation (CBRSI)

Institut de Recherches Halieutiques et Océanologiques du Bénin (IRHOB)



CELEBRATION DE LA JOURNEE MONDIALE DE L'OCEAN / édition 2017

CELEBRATION OF WORLD OCEAN DAY / 2017 edition

Thème : Notre océan, notre futur / Our ocean, our future

Avec la participation :

Des élèves des Collèges d'Enseignement Général et Technique

Date : Jeudi 08 juin 2017

Lieu : IRHOB: 350 rue 4.154 Akpakpa-dédokpo, Cotonou

Avec le soutien de :



Activities:

- Presentation of the importance of the oceans
- Projection of films on marine pollution



Participation in the 2018 D4D prize (public award)

Realization of a film on the use and advantages of
"Arduino" sensors

Sensors developed with the Internet of Things to
improve safety at sea, at lagoons and in lakes



Perspectives

- **Future collaboration between IRHOB and RBINS through its CEBioS program:**
 - 1. Project to improve the use of the COHERENS model in order to predict some ocean risks (Coastal erosion, Wave tide, etc.)**
 - 2. World ocean day 2018**
 - 3. Marine biodiversity (marine mammal follow-up)**
 - 4. Fish stock assessment (Fish larvae circulation)**



**Thanks TO THE CEBioS
team and for your
attention**

CEBioS^o

museum



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partner in development