

# Corporate CV

AxisIMA® is an international consulting firm located in Mexico. Across 20 years, the firm has specialized in providing critical, integrated and innovative solutions for coastal engineering, environmental impact assessment, environmental management and renewable energy project development. AxisIMA® has developed more than 500 projects in North America, Central America and globally, including Mexico, Venezuela, Nicaragua, Peru, Belize, India and the United States.



- Ports & Coastal Zones
- Real Estate & Industrial
- Tourism & Commercial
- Oil & Gas
- Renewable Energy
- Mining

# Background

Since 2004, AxisIMA has been implementing a self-developed methodology for the recovery of beaches subject to strong erosive processes. To date, more than 100 km have been successfully intervened between coastal protection and beach recovery in the Mexican southeast. Likewise, it has completed or ongoing projects on the subject in the USA, Central and South America, Belize and India.

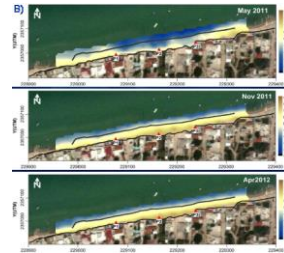
In this period, AxisIMA has developed various registered tools for coastal design and monitoring that it already markets within its service package.



## Beach Management



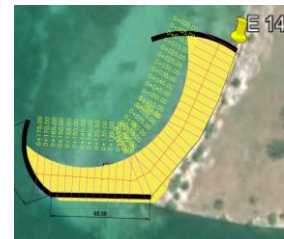
Restoration



Stabilization

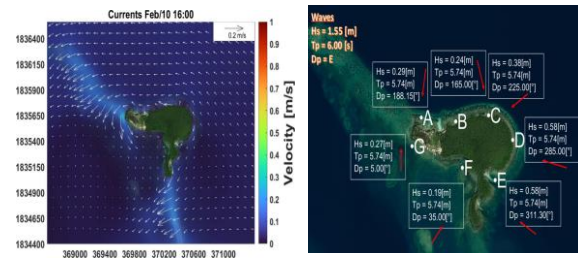


Dune Cores



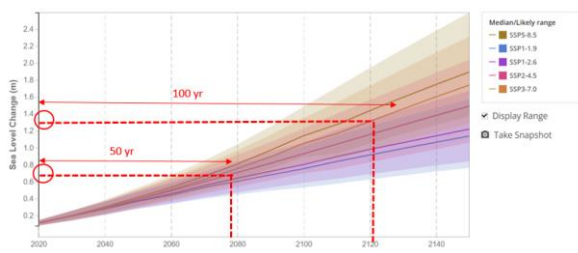
Artificial Beaches

## Hydrodynamics, Forecasting & Analysis



Current Analysis

Numerical Modeling

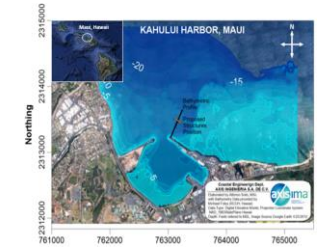


Forecasting

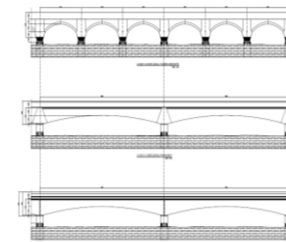
## Ports and Harbors



Project Model



Digital Elevation Model



Expansion Plan



Port Construction

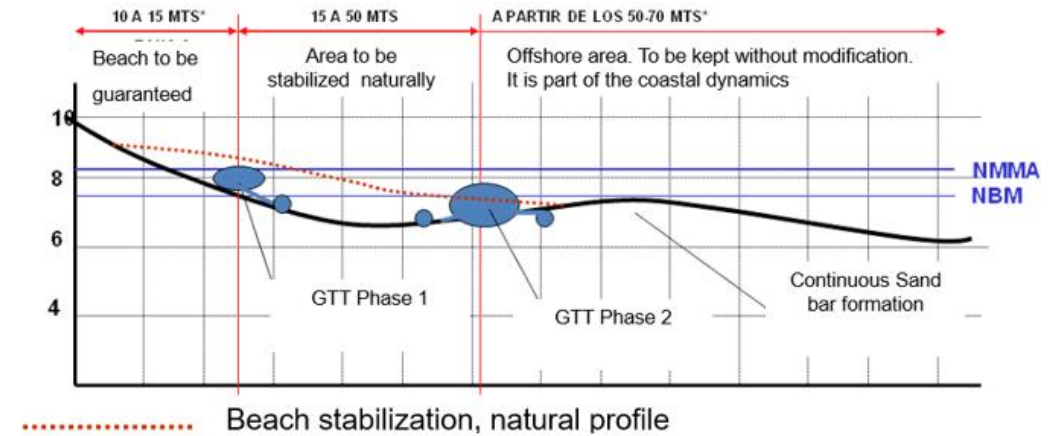
## ***Uaymitún, Yucatán, Mexico (2005)***

***Beach restoration completed in 2005, More than 18 years of stable beach***



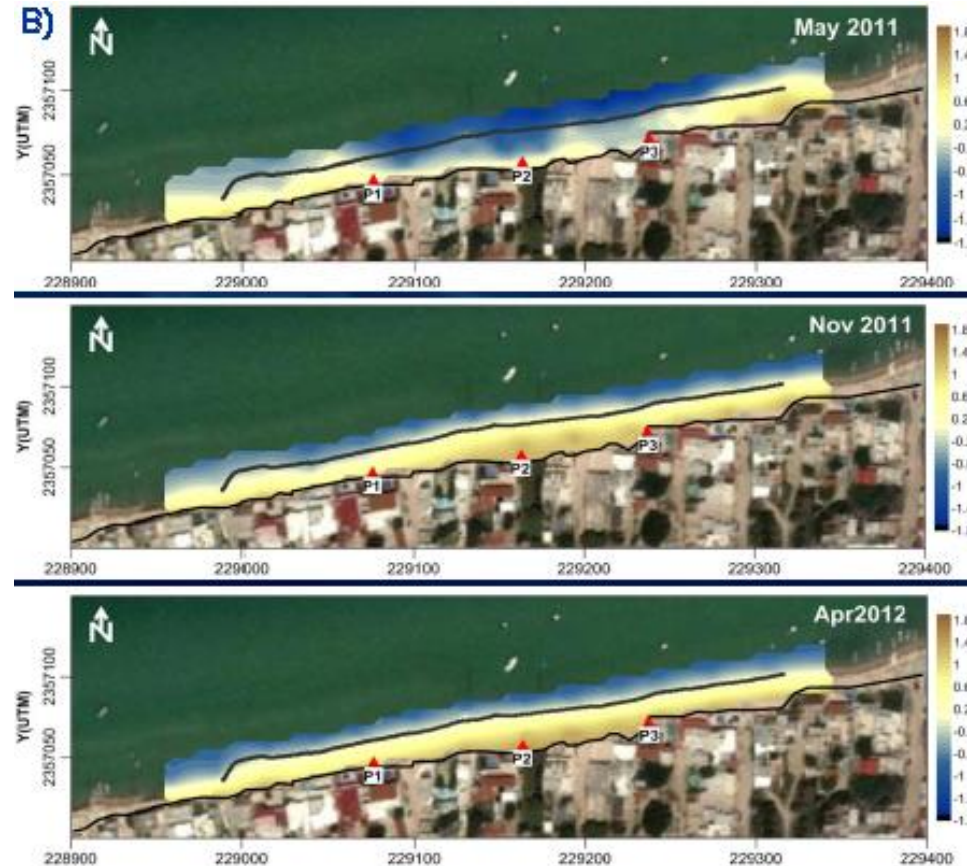
## ***Pemex Beach Club, Cd del Carmen. Campeche, México***

*Beach recovery completed by AxisIMA in 2010*



# Coastal Projects

## Chicxulub, Yucatan (2010-2016)



# Coastal Projects

## Bahía de Potosí, Zihuatanejo, Mexico (2023)

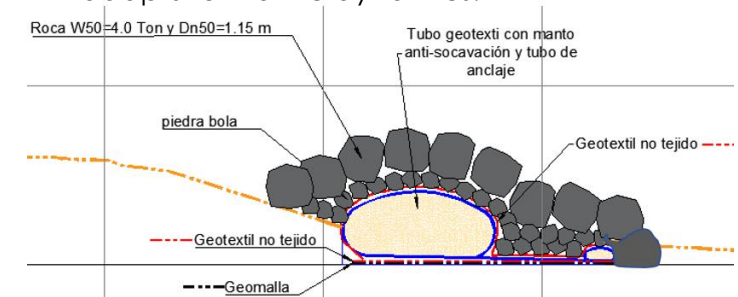
### The problem:

In the last 20 years, a large part of the Bahía de Potosí beach has been lost with erosion of the shoreline up to 70 meters. The first line of infrastructure formed by summer residences has been completely exposed to strong meteorological events with great damage to the buildings.



### The solution:

A Rock fill structure with a core made up of textile tubes was installed to provide the infrastructure with protection capable of absorbing hurricane waves while presenting flexible behavior that adapts to marine dynamics.



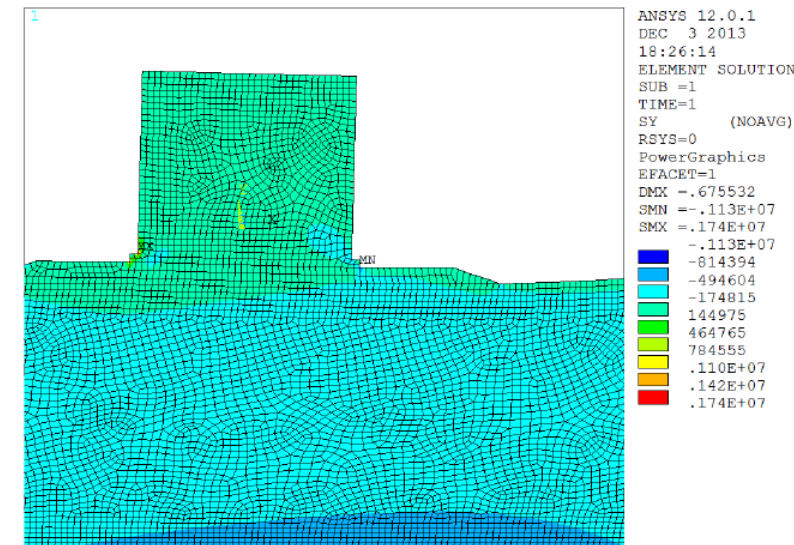
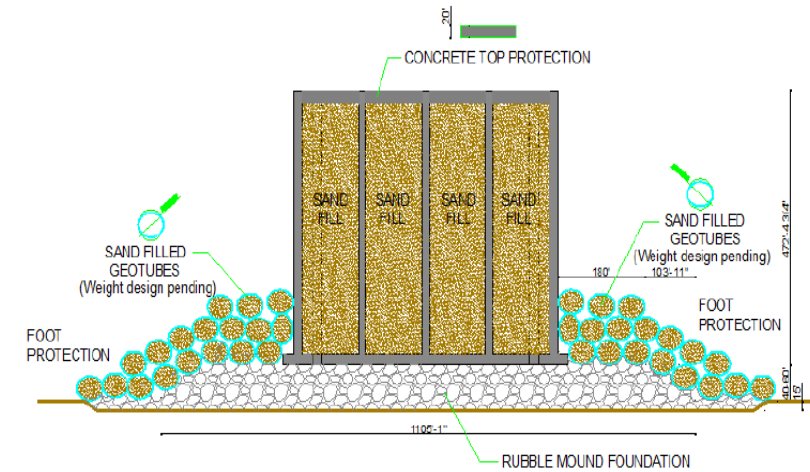
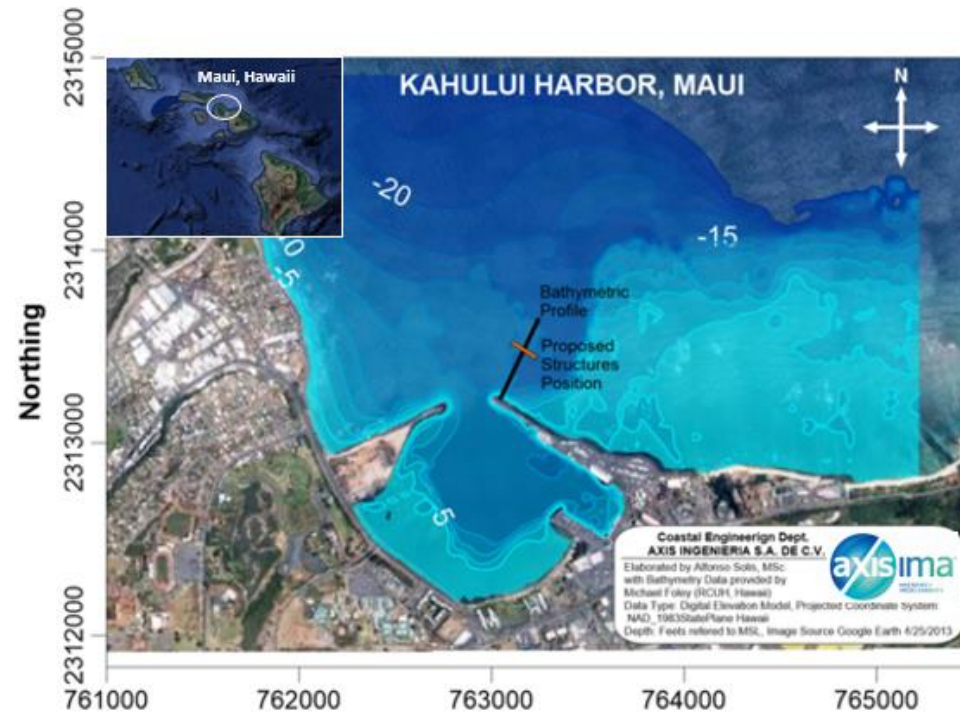
### Turnkey project Includes:

- Design and Engineering
- Project and terms of reference
- Construction
- Implementation of the annual system
- Monitoring and maintenance program

# Coastal Projects

## Kahului Harbor, Maui. (2015)

**Solution:**  
Prefabricated Concrete  
Caisson Submerged  
breakwater



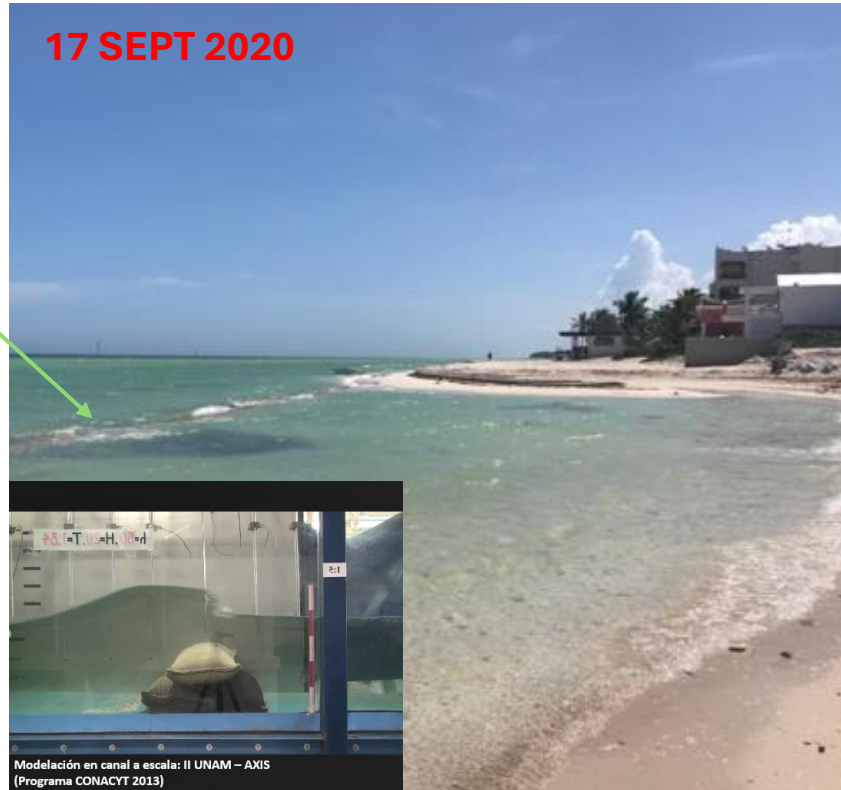
**AxisIMA® Services:** Engineering, Design and Terms of Reference  
**Client:** University of Hawaii  
**Year:** 2015  
**Location:** Kahului Harbor, Maui, Hawaii  
**Length:** 150 meters of submerged breakwater



# Coastal Projects

## Uaymitún, Yucatán, México (2020)

Installed  
submerged  
breakwater



**AxisIMA® Services:** Turnkey Project: Engineering, Design, Terms of Reference, Environmental permits and execution

**Client:** Residence owners

**Year:** 2020

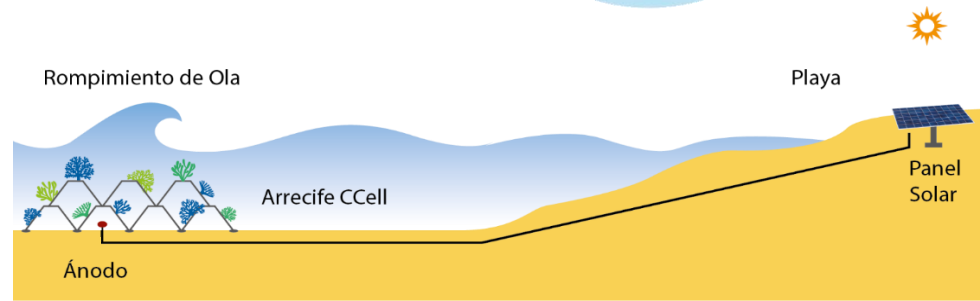
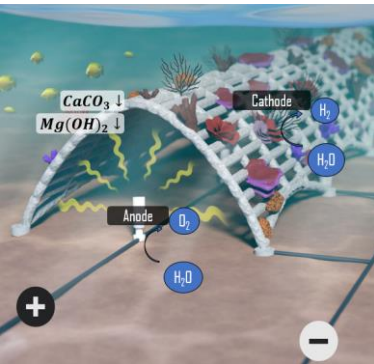
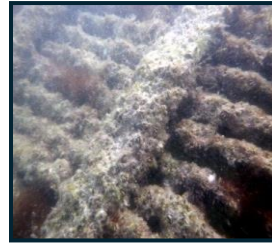
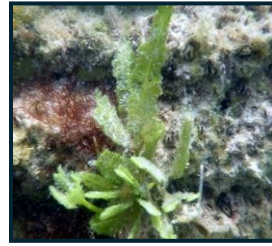
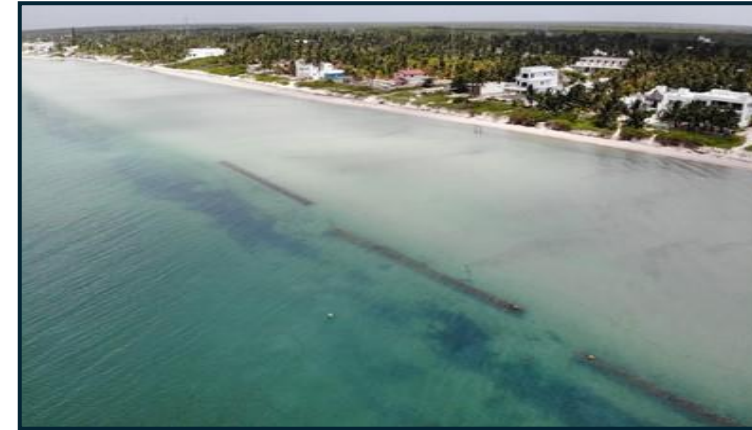
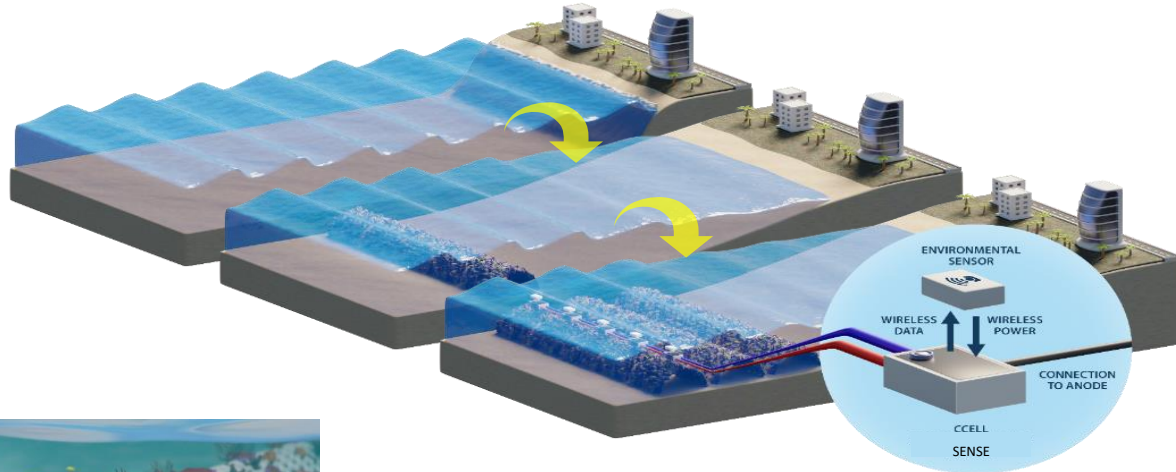
**Location:** Uaymitún, Yucatán, México



# Coastal Projects

## Telchac, Yucatán (2020)

Recovery of coastal ecosystems and beach stabilization



### Basic concept:

- 1) Generate wave reduction for beach stabilization (technology developed by CCELL®)
- 2) Generate rock base on reef for Coral growth

# Coastal Projects

## San Bruno Beach Case, Telchac, Mexico

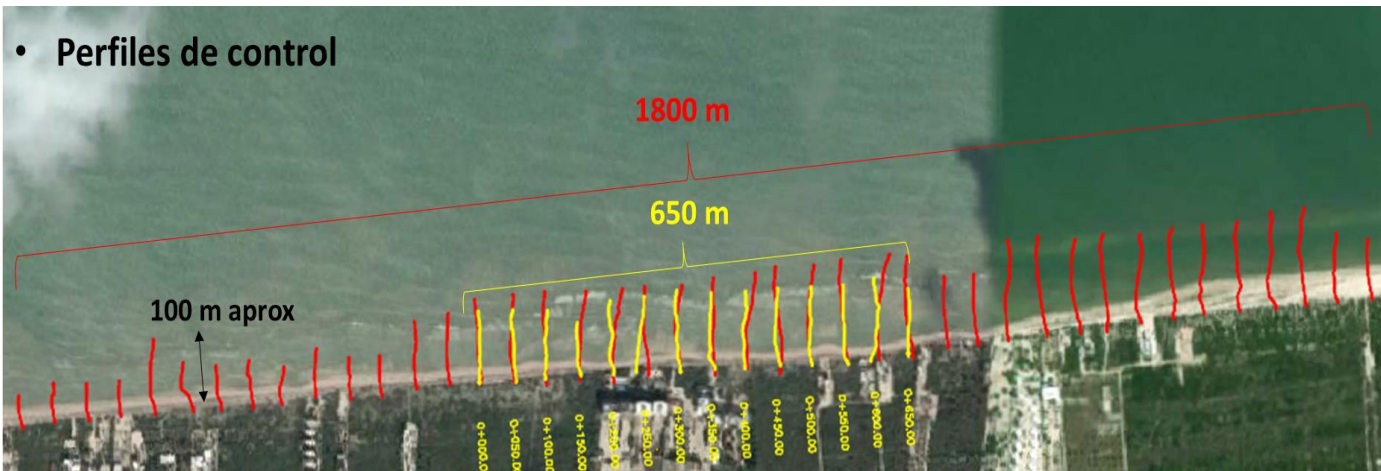
Recovery of coastal ecosystems and beach stabilization

Analysis of alternatives, engineering and execution of turnkey modality beach recovery project.

Permanent Beach Management in a stretch of 1800 meters

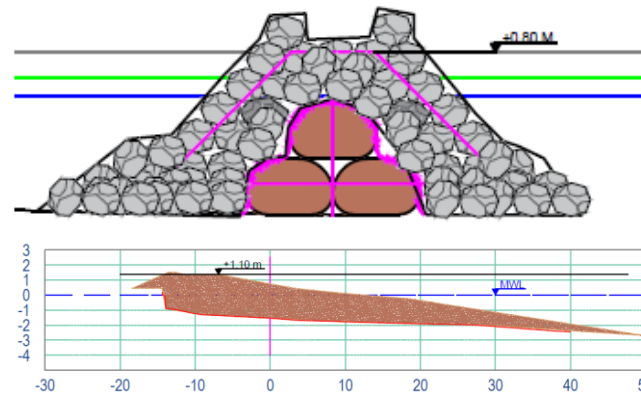
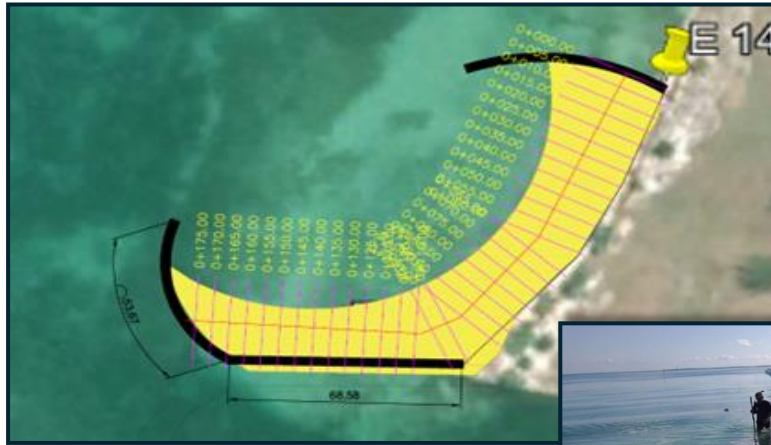
**Client:** San Bruno Neighborhood Association – Kayab

**Period:** 2015 to date



# Coastal Projects

## Caye Chapel, Belize (2023)



### Description:

Beach Length: 200 meters  
Beach area created: 6,300 m<sup>2</sup>  
Sand Volume: 27,600 m<sup>3</sup>  
Rock Volume: 4,700 m<sup>3</sup>  
Geotextile Tubes: 160 meters long, 240 m<sup>3</sup>

**AxisIMA® Services:** Field studies, alternatives analysis, design, and terms of reference

**Client:** Grupo Thor Urba

**Year:** 2023

**Budget:** USD 1,200,00

# Coastal Projects

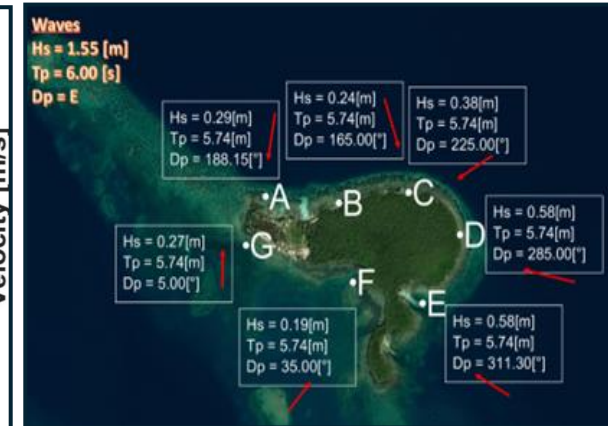
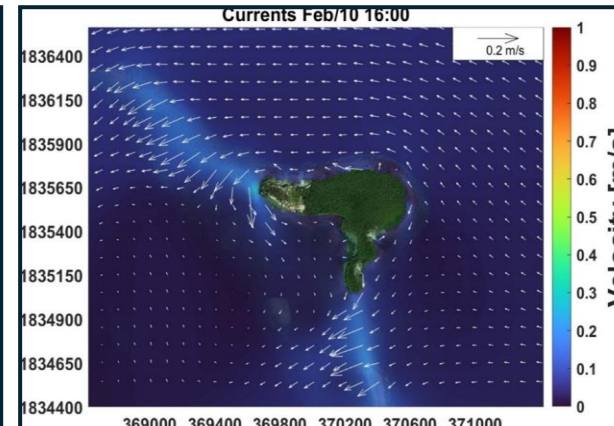
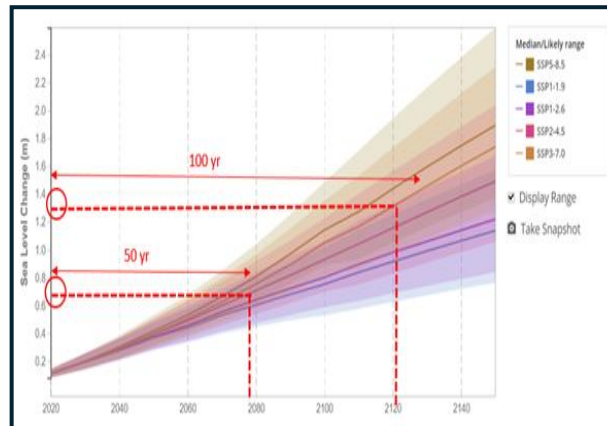
## Caye Crawl, Belize (2023)



Coastal Hydrodynamics  
Study and Climate Change  
SSP Scenario Analysis

**AxisIMA® Services:** Field work (Bathymetry and Geology), Hydrodynamic studies and numerical modeling for the design of structures on the island and linking climate change with the expected increase in wave energy and risks to the island

**Client:** Real Estate Developer  
**Year:** 2023

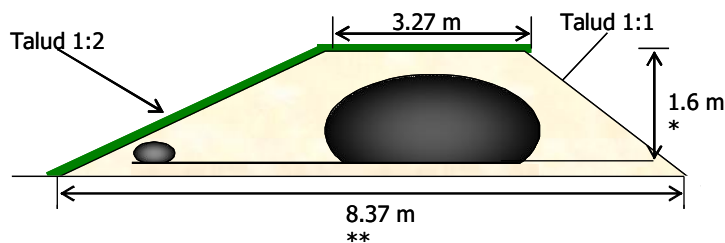


# Coastal Projects

## Yucatán, Mexico (2006-2023)

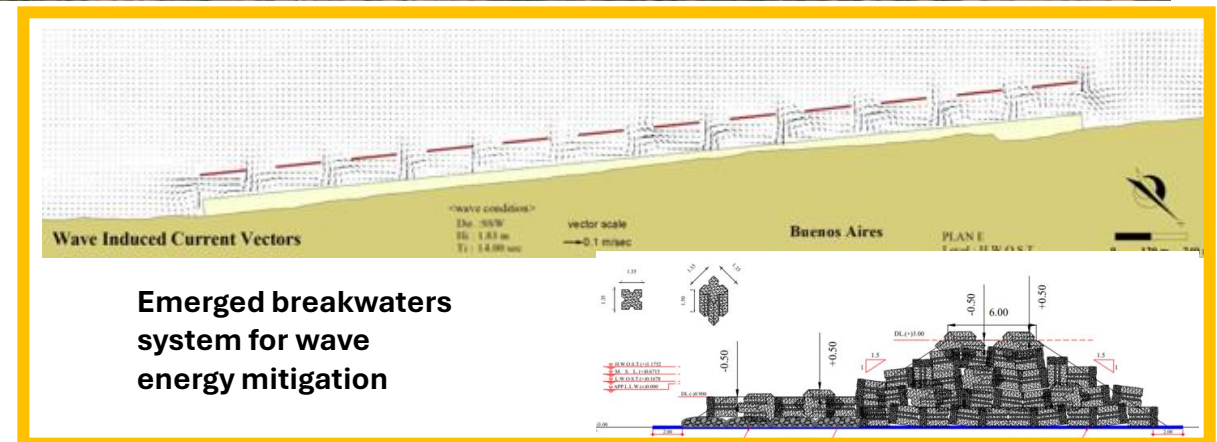
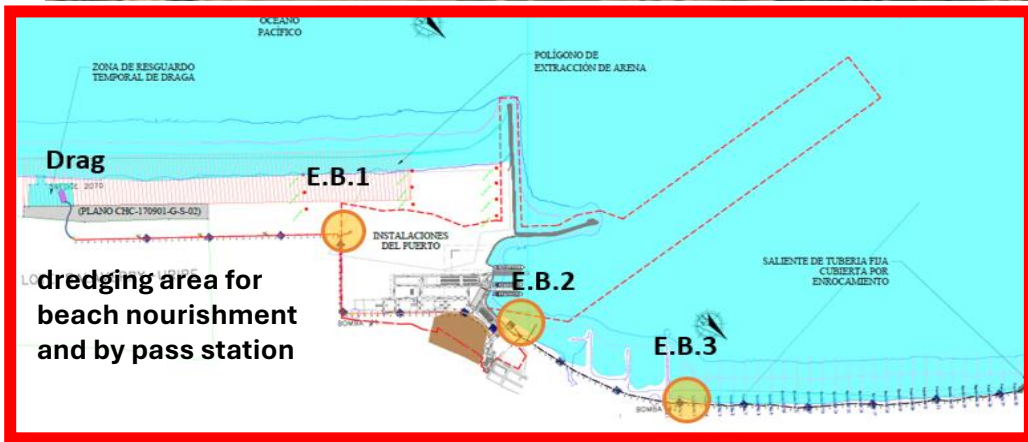
After the passage of Hurricane Wilma in October 2005, the coastal bar formed by the dune system that protected the inner marshland was severely damaged and destroyed in the areas of Las Coloradas Yucatán.

AxisIMA® Activities:  
Design, engineering, execution of the reconstruction of the dune and permanent monitoring and maintenance since 2006



# Coastal Projects

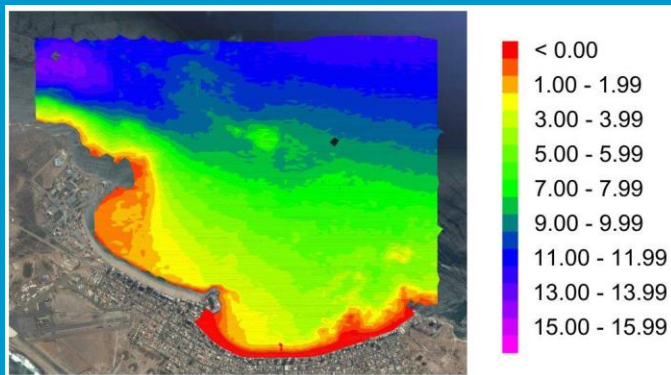
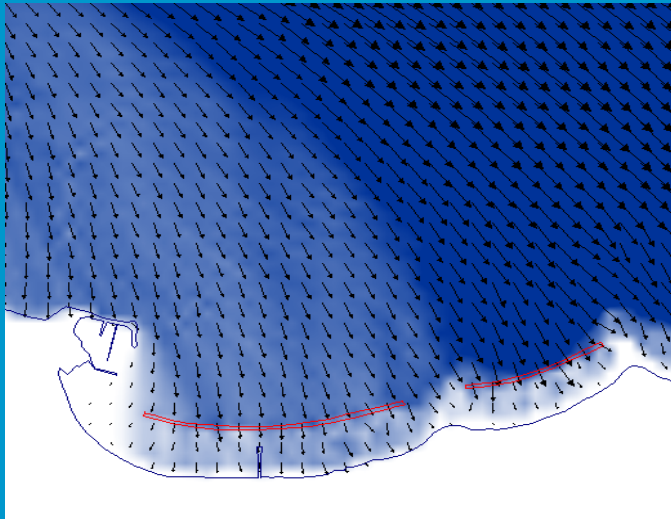
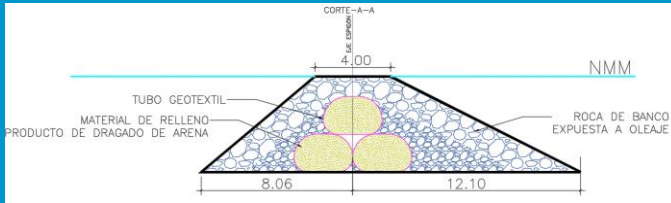
## Municipality of Trujillo, Peru (2018-2020)





# Coastal Projects

## Salinas, Ecuador (2016-2017)



Executive project and Terms of Reference for the recovery of San Lorenzo Beach

CLIENTE:



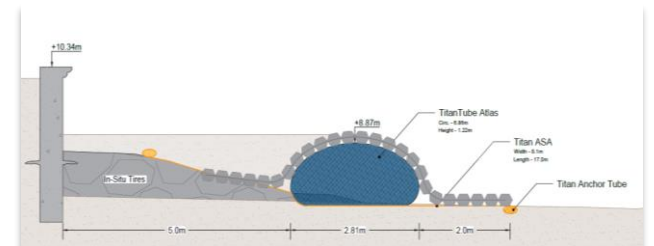
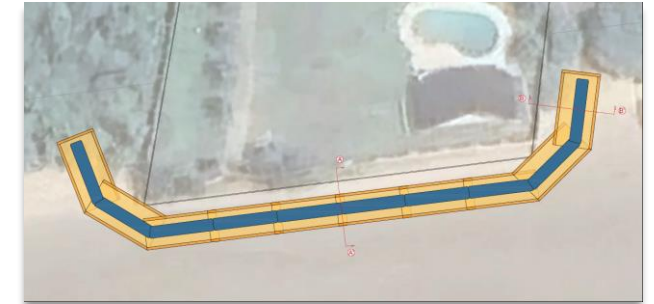
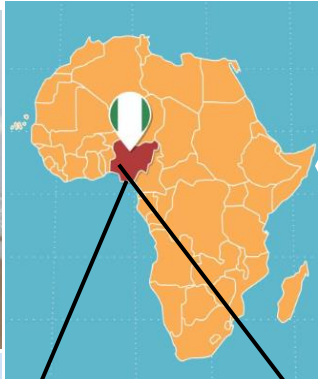
# Coastal Projects

## Dune Installation for Private Property Protection Nigeria (2024)

**Critical Problem:** Rising wave energy, fueled by global warming, is having catastrophic effects on the coastline. Accelerated erosion is threatening coastal infrastructure and endangering the well-being of surrounding communities

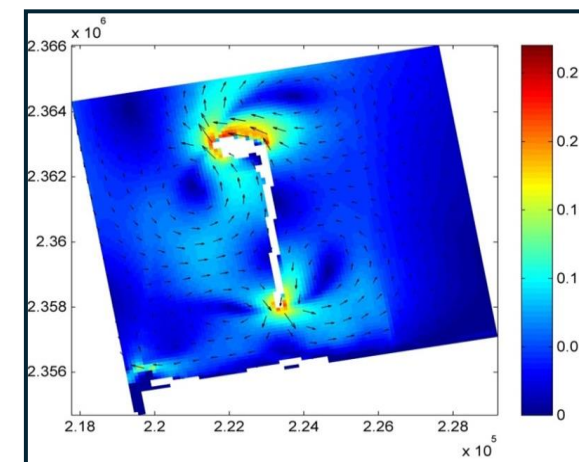
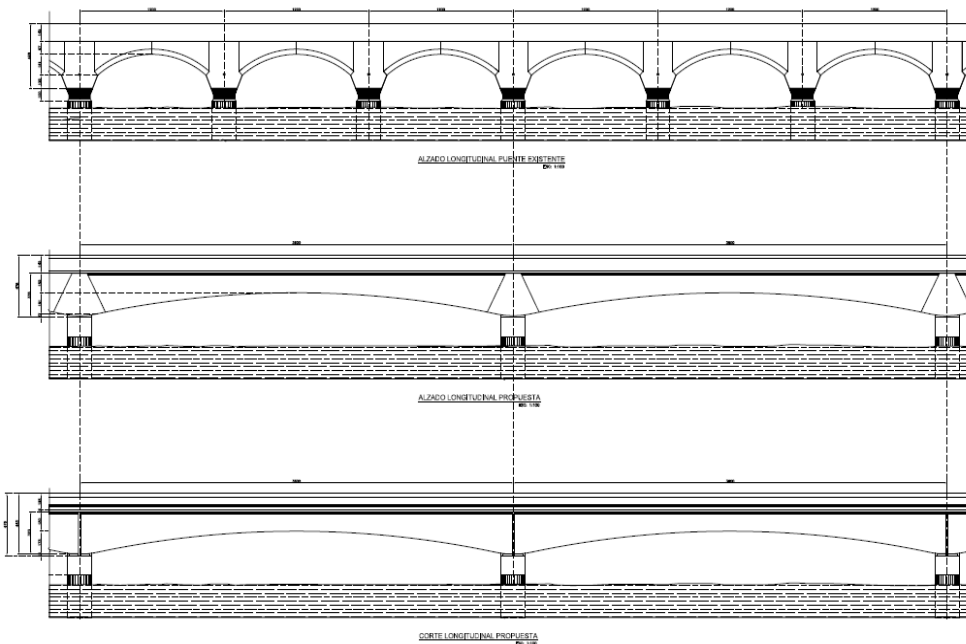
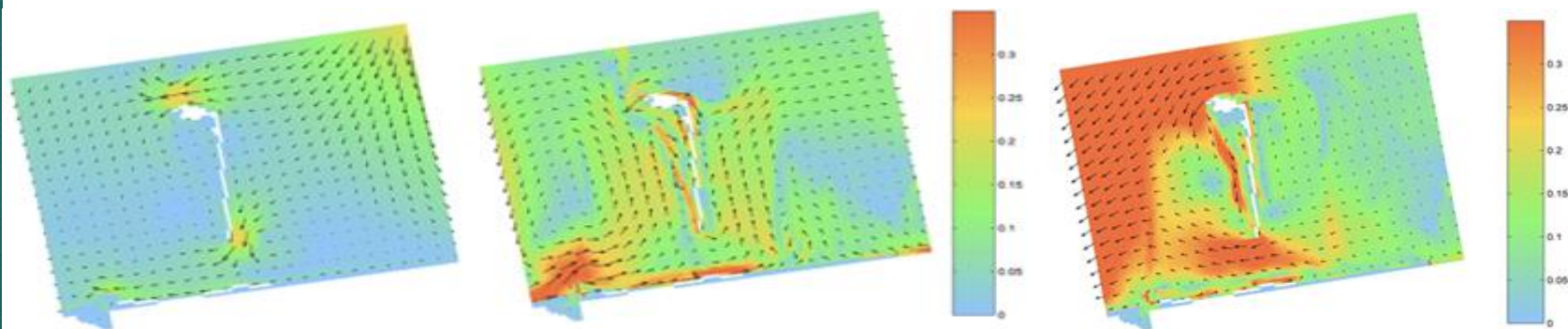
**The Solution:** A flexible structure composed of geotextile tubes (Titan Tubes) was designed to protect the property, reducing incident wave energy and controlling coastal erosion. This innovative solution, known as Dune Core, stabilizes the soil and provides a resilient barrier against the impact of the sea.

**FLINT TECHNICAL GEOSOLUTIONS:**  
Design, Manufactures and  
Geosynthetics supply  
**GEOFOUNDATIONS AND  
STRUCTURES:**  
Contractor  
**AXISIMA:**  
Engineering and site assistance.



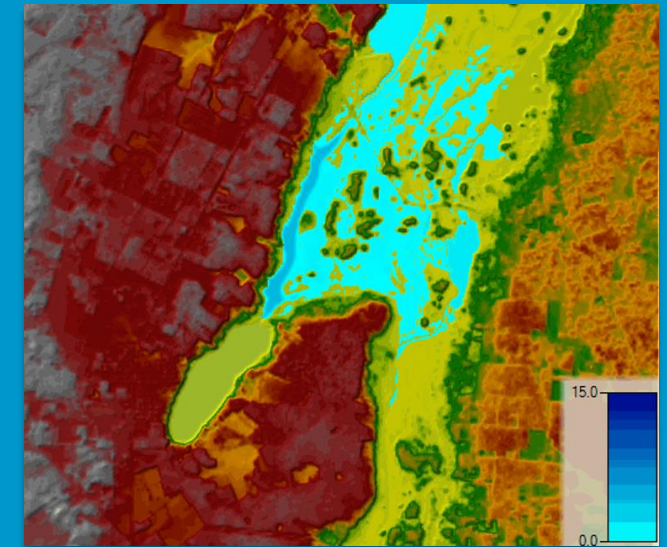
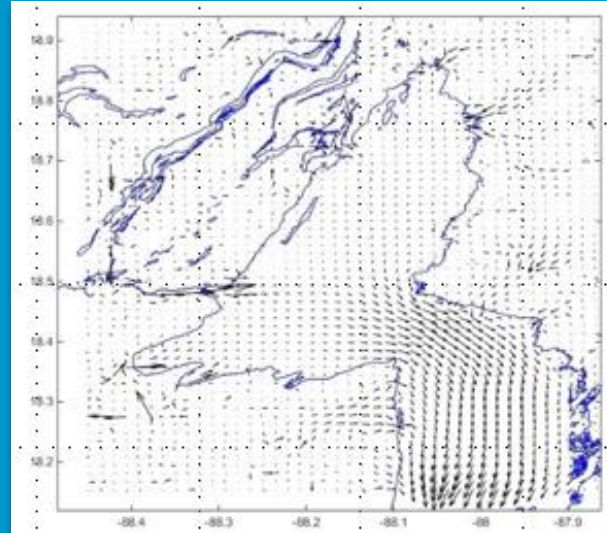
# Hydrodynamics Studies

Hydrodynamics study and numerical modeling to determine wave design parameters of the viaduct expansion project at the Progresso port terminal (2014)



## Xul-Ha, Quintana Roo (2019)

Hydrological modeling study for flood analysis



### Obtaining maximum flood levels for different return periods for the development of 215 Ha

- Hydrodynamic simulation (currents and storm surge)
- Hydraulic simulation (land runoff flow)
- Hydrological simulation (water accumulation in extreme events)



## Sustainable Coastal Management Program for the Government of Maharashtra, India (2016)

Sustainable Coastal Protection and Management: Tranche 2: Feasibility Report: Part 1

Sustainable Coastal Protection and Management Investment Program  
(SCPMIP): Tranche-2

### Feasibility Report Part 1: Designing Robust Solutions

Prepared For  
Maharashtra Maritime Board (MMB), Government of Maharashtra

By  


Sanctuary Beach Pte Ltd (Singapore)

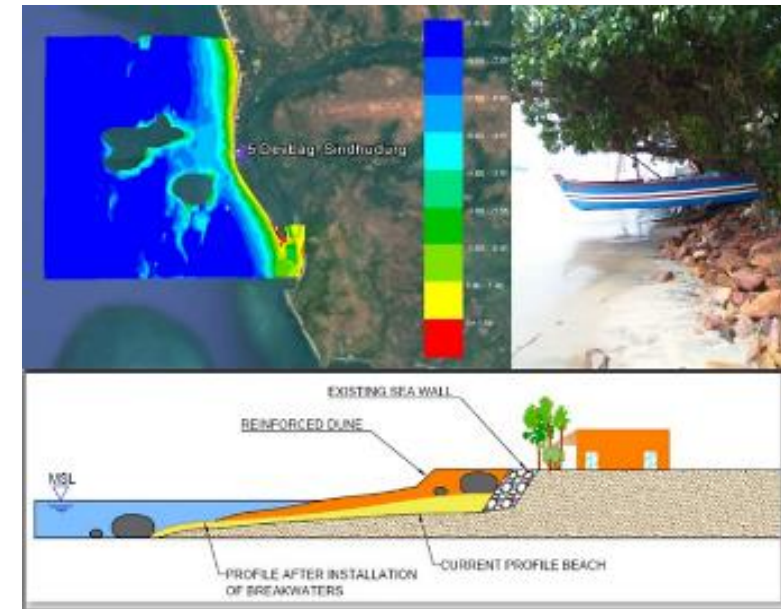


HOV Environment Pvt Ltd (India)



Axis Ingeneria (Mexico)

June 2017



Client:  
Maharashtra Maritime  
Borde, India

Proyecto financiado por el ADB (Asian  
Development Bank)



## Yucalpetén Yucatán, Mexico (2011)



AxisIMA® Services:  
Engineering, Environmental  
Management and Technical  
Assistance in the construction  
of the Fishing Port

Client: Progreso Port Authority

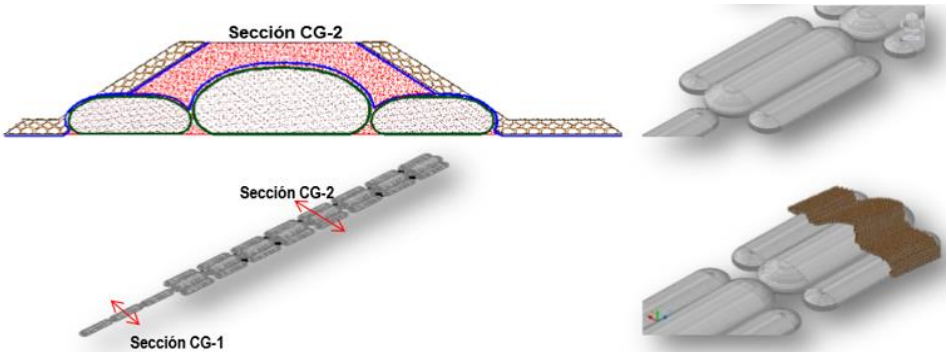
# Ports & Harbors

## Maracaibo, Venezuela (2011)



AxisIMA® Services:  
Engineering and construction  
management of the access  
channel jetties for the  
Termozulia II combined cycle  
plant in Maracaibo,  
Venezuela.

Client: CONVECA

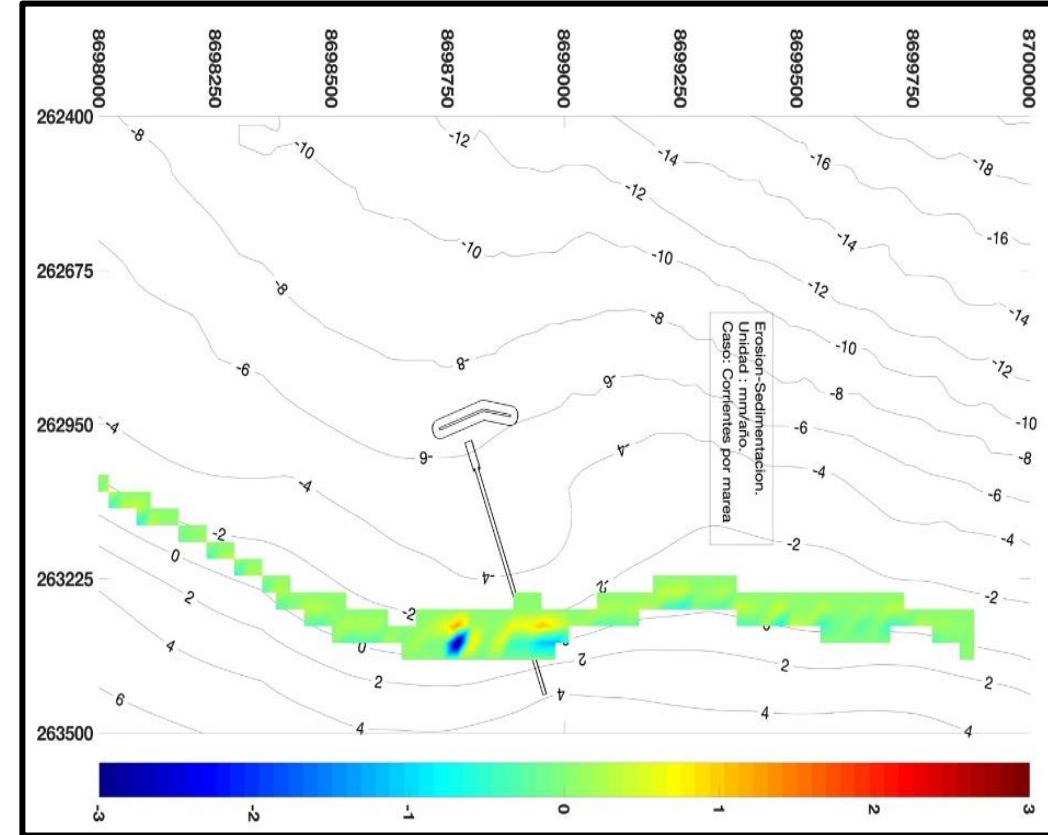
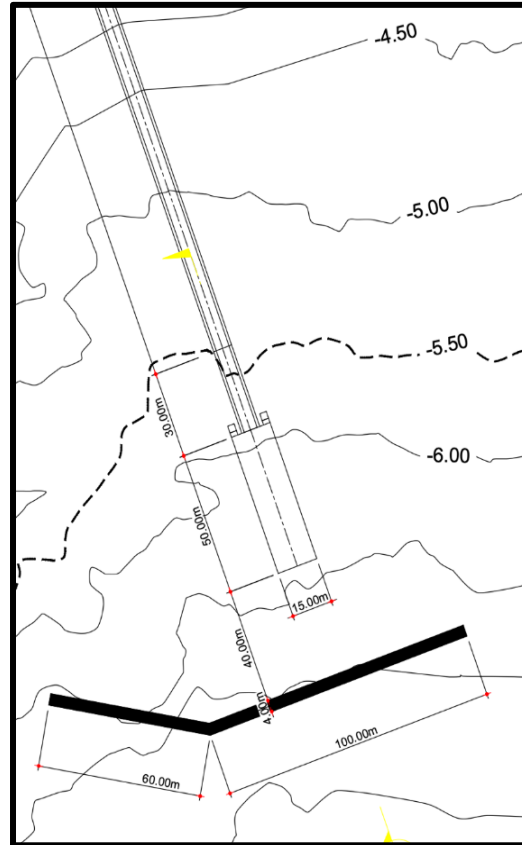
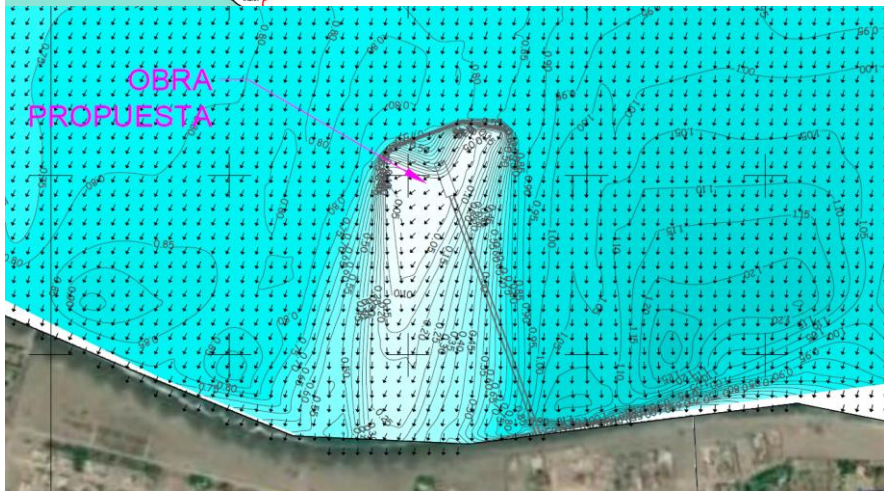
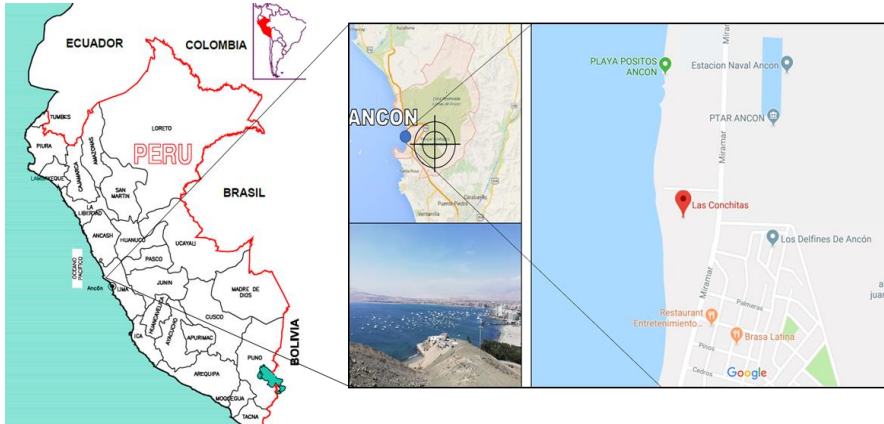


# Ports & Harbors

## Ancón District, Lima Province, Peru (2019-2020)

Evaluation of alternatives, numerical modeling, design and terms of reference for the new

“Las Conchitas” fishing port





Gracias/धन्यवाद/  
Thank you



[www.axisima.com](http://www.axisima.com)



Address:

C21 núm. 161 A x 38 y 60  
Col Buenavista CP 97127  
Mérida Yucatán México  
Tel:+52 999 9255264