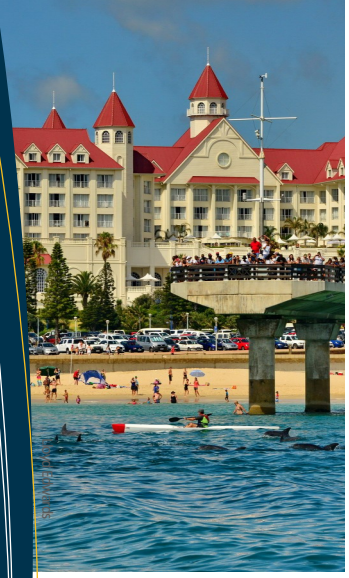
Participating Institutions & Project Partners

Nelson Mandela University (NMU)
Institute for Coastal and Marine Research (CMR)
Rhodes University (RU)
University of Fort Hare (UFH)
Council for Geoscience
South African Environmental Observation Network (SAEON)
South African Institute for Aquatic Biodiversity (SAIAB)
African Coelacanth Ecosystem Project (ACEP)
Higher education, Science and Technology, National research foundation (DST/NRF)



## WHY WE NEED YOU

Building upon the Institute for Coastal and Marine Research's overarching Algoa Bay Marine Spatial Planning project, the AB CoDyM process depends on **stakeholder involvement** to provide information, ideas and contribute to sustainable marine planning. The model tries to incorporate everybody's opinion. Those who are interested are encouraged to be a part of AB CoDyM.

## WHAT IS IN IT FOR YOU?

The AB CoDyM process is a ***unique*** opportunity to have your say and give input towards a shared understanding of marine planning and management for the Bay. The model is a collaborative product **by**, and **for** stakeholders in the Bay. We are working towards:

- **Achieving a holistic understanding of the interactions amongst sectors and the marine environment in Algoa Bay**
- **Improving the decision-making quality of stakeholders through transparent planning and scenario-building**
- **Reaching consensus regarding sustainable management in the Bay**

## WANT TO KNOW MORE?

Contact:

**Algoabayproject@gmail.com | facebook.com/AlgoaBayProject**

NELSON MANDELA UNIVERSITY

Coastal and Marine Research

science & technology
Department: Science and Technology
REPUBLIC OF SOUTH AFRICA

NRF National Research Foundation | SAIAB South African Institute for Aquatic Biodiversity | NRF National Research Foundation | SAEON South African Environmental Observation Network

ACEP

RHODES UNIVERSITY Where leaders learn

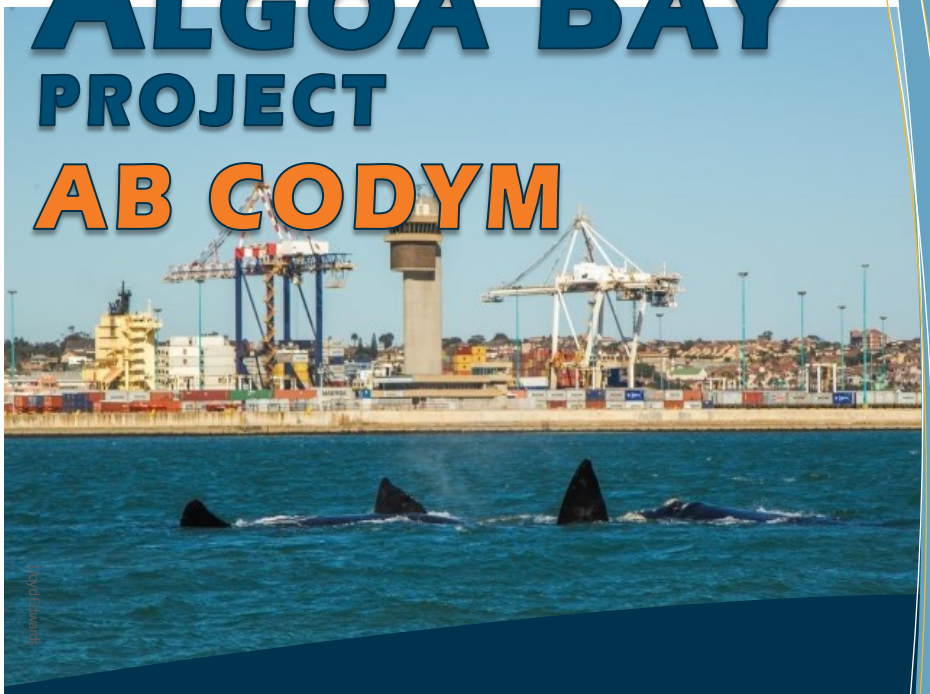
University of Fort Hare Together in Excellence

Council for Geoscience Leaders in Applied Geoscience Solutions

WIOMSA Coasts Ocean and People

# THE ALGOA BAY PROJECT AB CODYM

*Working together for our oceans*



## AN OVERVIEW OF AB CODYM:

## Algoa Bay Collaborative Dynamic Modelling process

AB CoDyM is a collaborative effort between multiple stakeholders that aims to apply systems analyses to investigate the socio-ecological dynamics of the main human uses in Algoa Bay. This is to determine the influence that these uses have on marine sustainability in the Bay.

## DOES THE AB CODYM PROCESS AFFECT YOU?

Everyone needs and benefits from **healthy oceans**.
A variety of ocean users and stakeholders are included in the AB CoDyM process:

**Fishing**

**Mariculture**

**Land-Based Polluting Activities**

**Conservation**

**Tourism**

**Recreation**

**Bunkering**

**Shipping**

**Cultural Activities**

## WHO

Facilitated by a community of academics from the Institute for Coastal and Marine Research (CMR), Nelson Mandela University, with funding from the **Algoa Bay Project**, a transdisciplinary research project shared across several marine science research institutions in the Eastern Cape.

## WHEN

AB CoDyM runs between May 2019— May 2020, with the main stakeholder interactions scheduled for mid **August 2019 – May 2020.**

## WHY

This project aims to facilitate multisectoral stakeholder engagement, in an attempt to simulate sustainable management strategies for Algoa Bay to ensure both economic prosperity and environmental sustainability.

## GOALS

To achieve a **more holistic understanding of the interconnections** of the sectors in Algoa Bay and to **improve the decision-making ability** of multiple stakeholders by creating a tool that simulates the overall health of the Bay as a result of sectoral actions.

## MODEL SYNTHESIS

From the activities undertaken in the scoping phase (see Figure 2), we are developing an initial model with a Marine Sustainability Index (MSI) at the centre. The MSI is driven by the ecological functioning of different sectors in Algoa Bay, namely fishing, shipping, bivalve mariculture, land-based wastewater treatment and tourism. Each sector impacts other sectors and the marine environment in different ways. The model forms the basis for investigating these sectoral actions and exploring with stakeholders how certain policies can minimise negative impacts both within each sector and within the larger marine system.


**Figure 1. Connections of the AB CoDyM model**

## THE PROCESS

| AB CoDyM phase | 1. Scoping | 2. Initial stakeholder engagement: *Individual meetings, interviews, and small focus groups* | 3. Sector-based workshops | 4. Multi-sectoral workshop | 5. Refining & upscaling |
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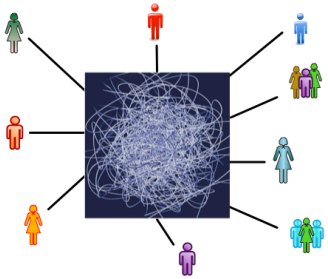
| Illustration |  |  |  |  |   |
| Timeframe | May - mid-Aug. 2019 | late August – November 2019 | Feb - March 2020 | April - May 2020 | TBC |

**Figure 2. AB CoDyM process (based on Clifford-Holmes & Pollard (2016))**

## PHASES

**1 Scoping phase**
- Problem analyses
- Literature review
- First model draft **based on theory**

**2 Initial stakeholder engagement**
- Individual stakeholder meetings
- Expert information gathering
- Second model draft **based on interviews**

**3 Sector-based workshops**
- Sectoral meetings
- Identification of trade-offs
- Model quantification **based on meetings**

**4 Multi-sectoral workshop**
- Multi-stakeholder workshop
- Scenario game
- Visual user interface

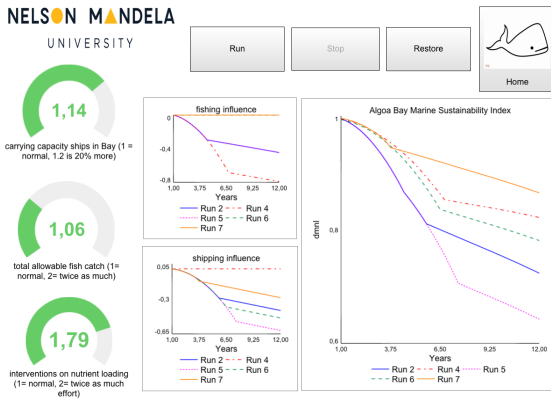



**Figure 3. Early draft of Visual User Interface**