



Africa Regional Centres of Excellence (ArcX) related to Green Transition Programme

Ocean Component: Project OPERA Ocean Prediction Enhancement in Regions of Africa

This initiative is one of the five components of the European-funded programme “Support to Regional Centres of Excellence related to Green Transition in Sub-Saharan Africa (2021-2027) – the ArcX programme”. The Ocean component, entitled “**Ocean Prediction Enhancement in Regions of Africa - OPERA**” aims to strengthen Sub-Saharan African Ocean prediction capabilities and cooperation at national, regional, pan-African levels.



OPERA Budget: €7 million

Implementation duration: 2025-2028

Objectives

Improve ocean resources sustainability and human welfare in sub-Saharan Africa by strengthening digital and scientific capacities in ocean monitoring and forecasting.



Beneficiaries

- African governments and policymakers
- Regional Centres of Excellence and other institutions involved in ocean science
- Regional and local authorities involved in coastal management and disaster risk reduction
- Blue economy stakeholders (fisheries and aquaculture, coastal development, offshore energy, maritime transport and security, etc.)
- Civil society (citizen scientists, coastal communities, non-governmental organisations)

Specific targets

1. Strengthen African capacities in ocean monitoring and forecasting at national, regional, and pan-African levels.
2. Develop regional autonomy through African Regional Centres of Excellence for locally operating and using ocean data and forecasts.
3. Develop fit-for-purpose digital ocean tools and services to improve coastal hazard mitigation, support sustainable blue economies and safeguard marine ecosystems.
4. Increase policymaker awareness of innovative decision-support tools for coastal zone and ocean management.
5. Expand the African ocean prediction community and foster cooperation within Africa and globally.

Areas of impact



SUPPORT POLICY & FOSTER LONG-TERM COMMITMENT

help achieve goals of key ocean related priorities in African and European frameworks and increase long-term support for ocean monitoring and forecasting



COOPERATION & COMMUNITY BUILDING

expand ocean prediction community in Africa, fostering cooperation within sub-Saharan Africa and with Europe and global community



NEW SERVICES AND APPLICATIONS

to support disaster risk reduction and response, blue economy and marine conservation efforts



CAPACITY SHARING

knowledge & technology transfer



STRENGTHENED CAPABILITIES

enhance Ocean monitoring and forecasting capacities

Organisational setup

The project is part of the collaborative efforts **between Europe (the European Union and Mercator Ocean International)** and various African and international partners. It emphasises co-design and co-development with stakeholders to ensure the development of fit-for-purpose ocean prediction tools and services. This project is part of the European Union's support to **strengthening Digital and Science, Technology, and Innovation capacities** in sub-Saharan Africa for sustainable development.

Lead Organisation



Mercator Ocean International implements OPERA through its role as coordinator of the OceanPrediction Decade Collaborative Centre, leveraging its expertise as the implementer of the Copernicus Marine Service and its leadership role in the European Digital Twin Ocean Programme.

African Regional Centres of Excellence

Three Regional Centres of Excellence will lead three consortia of African partner institutions. One consortium focuses on developing and operating ocean forecasting systems at regional and coastal scales and the other two on developing tailored applications integrating Ocean data products.

Enhanced African-European collaboration on knowledge-driven sustainable development

OPERA will serve the ocean information and knowledge priorities outlined in African strategic frameworks, while aligning with the European Union's commitment to scientific knowledge-based, innovation-led sustainable development. By integrating these frameworks and shared goals, OPERA will enhance ocean prediction capacities to address Ocean information and knowledge priorities in a coordinated collaborative network.

Key strategic frameworks



- **African Union Agenda 2063: 'the Africa We Want'**,
- **Africa Blue Economy Strategy 2019**,
- **Ocean Decade Africa Roadmap**, with particular focus on priorities to enhance ocean forecasting capabilities and develop a digital twin Ocean knowledge hub,
- **The European Union's Global Gateway strategy**, which fosters sustainable and high-standard infrastructure investments in partner countries, including support for ocean governance and marine resource management,
- **The EU Ocean Pact**, reinforcing commitments to ocean conservation, sustainable fisheries, and climate resilience.

The European Union (EU) remains a leading supporter of **SDG 14 (Life Below Water)** – the least funded Sustainable Development Goal. Through OPERA, the EU is bridging financial and technical gaps, ensuring that Ocean sustainability efforts receive the attention and investment necessary for long-term impact, contributing directly to SDG 14 (Life Below Water), as well as actions to mitigate and adapt to climate change (SDG 13), develop new economic opportunities (SDG 8) and digital infrastructure innovations (SDG 9).



ArcX programme
<https://arx.green>



OceanPrediction DCC website
dedicated page
<https://bit.ly/4IDQvVp?r=qr>