REFERENT PROJECT

Managing the West African Coast - «Historical data for the future of the West African coast » - WACA-F

CONTACT

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RELATED ACTIVITIES

- Management of the coast and sea

PURPOSE OF THE INITIATIVE

Cerema coordinates France's WACA-F project« Historical data for the future of the West African coast »in partnership with the WACA programme, launched by the World Bank.
WACA (*West African Coastal Areas Management Program*) is a programme of comprehensive management for the West African coast.. Initially, it encompasses the efforts of six West African coastal countries (Benin, Côte d'Ivoire, Mauritania, Sao Tomé-et-Principe, Senegal, and Togo) to manage their coastal resources. The programme also aims to reduce natural and man-made risks to coastal communities.
The French WACA-F project sets out to improve our knowledge of coastal floods, erosion, and shoreline recession. It provides three countries in the region (Senegal, Benin, and Togo) with access to old bathymetric surveys and mapping data, resources that are both incredibly useful and unique in the region. The project is based on making use of topographical and hydrographic archives (sea charts, plans, bathymetyric reports, aerial photos) held by Shom and IGN. It provides access to these historical coastal data (in a digital, georeferenced format) so that the scientific community and various national authorities can better understand the coastal dynamic, and plan for the future. WACA-F helps local authorities and communities to interpret the data contained in the resulting database, thereby facilitating the smooth execution of the project and the World Bank's WACA programme.

CLIENT/PARTNER NEEDS

Around one third of people in West Africa live on the coast, where demographic growth stands at 4% per year. Coastal areas produce 56% of the region's GDP. The legal fishing industry in West African waters catches more than 1.6m tonnes, representing a value of $2.5bn on the wholesale market. In addition to the fishing industry, the coast is also home to major cities and ports, as well as agri-food industries and oil rigs.

But the future and productivity of West Africa's coastal ecosystems is under threat from the development of non-sustainable infrastructure, unsuitable resource management, and natural environments that are still exposed to a variety of sources of pollution. The consequences of climate change, such as rising sea levels and temperatures, landslides, storm tides, and more frequent coastal flooding, all make the region more vulnerable. In some places, coastal erosion takes place at a rate of more than 10m every year. Less then 10% of urban areas have waste water disposal services, and 20% to 30% of mangroves have been damaged or destroyed in the past 25 years.
Faced with these economic, environmental, and social challenges, in 2007 the West African Monetary Union (UEMOA) launched the West African Regional Coastal Erosion Prevention Plan In 2015, in an effort to counter the worsening situation caused by shoreline recession in West Africa, UEMOA entered a partnership with the World Bank, the Nordic Development Fund and the International Union for Conservation of Nature (IUCN). This partnership led to the creation of the WACA programme, to which France contributes through the WACA-F project.

CEREMA'S SOLUTION

Cerema provides project management assistance to the Ministry for the Ecological Transition (MTES) by coordinating the partners working on the WACA-F project (Shom, IGN, BRGM, World Bank, if necessary). It works with the Centre de suivi écologique (CSE) in Dakar (Senegal) as well as with local institutional stakeholders, including ministries of the environment and maritime affairs in WACA-F countries. When required, Cerema also carries out appraisals of studies on behalf of the World Bank, the project's technical committees, and local partners. More specifically:

- **Cerema compiles a summary of available shoreline recession data sources and knowledge bases** for two to three areas seen as priorities by the steering committee: one per country along the coast of Senegal, Benin and Togo. This enables a common working framework to be created, based on shared data. The project can harness an unprecedented documentary archive, spanning maritime charts (going back over 200 years) and historical aerial photographs (past 50 years). Senegal tested a coastal erosion indicator for the 2000-2018 period.
- **Cerema developed a web portal with a gallery of 2000 digital aerial photographs**. Civil engineering work and coastal developments that may have a direct effect on the coastline and are visible on satellite images have been identified. Cerema is using this knowledge to research long-term solutions to coastal erosion, and natural solutions in particular.
- With its partners at BRGM, IGN and Shom, Cerema is disseminating its results and seeing them put to use through events (scientific and technical seminars), technical documents, and communications.

Through the coastal observation made possible by the WACA-F project, Cerema will ultimately be able to help set up early warning systems, guide coastal planning and development, and support policies to develop resilient coastal towns, cities, and regions.

CLIENT

Ministry for the Ecological (MTES)

PROJECT PILOT

Cerema Water, Sea and Rivers Engineering Division
Environment & Risks Department

SCHEDULE

2017-2021