

ADAPTING TO CLIMATE CHANGE AND COASTAL RISK PREVENTION

REGIONAL SHORELINE MONITORING STUDY

DRAWING UP OF A MANAGEMENT SCHEME FOR THE WEST AFRICAN LITTORAL ZONE



The regional study for the monitoring of the shoreline and the drawing up of a management scheme for the West African littoral zone was launched by UEMOA (West African

Economic and Monetary Union) as the first stage of the Regional Programme to Combat Coastal Erosion (PRLEC – UEMOA), subject of Regulation 02/2007/CM/UEMOA, adopted on the 6th of April 2007. This decision followed from the recommendations of the Conference of Environment Ministers dated 11th of April 1997, in Cotonou. The Regional Programme to Combat Coastal Erosion was approved on the 25th of January 2007, during the meeting of Environment Ministers held in Cotonou (Benin). The study was conducted by the International Union for the Conservation of Nature (IUCN) under the responsibility of its Marine and Coastal Programme (MACO) for Central and Western Africa, which is coordinated from Nouakchott. This programme is a theme-based component of the Central and Western African Programme (PACO) of IUCN, whose Regional Office is located in Ouagadougou.

A SERIOUS CONCERN SHARED BY THE COASTAL STATES OF WEST AFRICA

The practical consequences of coastal erosion, and more broadly, of natural changes in coastal areas, have been visible in West Africa for several decades (cf. WACAF III). These impacts, already noted at a number of Pan African Ministerial conferences, are today increasing, and are all the more significant as the concentration of population and infrastructure in the coastal strip is increasing rapidly. The receding shoreline typically observed in West Africa is the result of various factors, in particular related to climate change, but also to human activity. Shoreline hardening, the deterioration of natural formations (green infrastructure), the extraction of materials and the multiplication of dams deprive these fragile coastal areas of important sediment deposits. The situation is compounded by the lack of coordination of anti-erosion solutions, at local, national and inter-State levels. These different elements together aggravate the risk situations observed and the threats weighing on the goods and the safety of the population.



The erosion observed South of the pier at Nouakchott Harbour determines a considerable risk of marine intrusion threatening the urban districts situated below sea level.

WEST AFRICAN COASTAL AREAS: FACING THE FUTURE

The necessity of anticipating future issues was the justification behind the undertaking of prospective work, particularly, concerning the expected growth in urban concentrations and economic activity. The findings of the AFRICAPOLIS programme and the method already used in the WALTPS study have led to projections that raise cause for concern. The population concentrated in urban coastal areas, which is currently approximately 18 million for the 11 countries concerned, is expected to double by 2030, and then double again by 2050. Even in a moderate scenario in which disparities would be under control, polarising the development of coastal systems inland, the urban populations of the coastline could exceed 70 million by 2050, with a geographic distribution still extremely heterogeneous. Facing such stakes, the prevention of coastal risks takes on critical importance.

RESULTS AND OUTLOOK

The study was based on geodynamic and coastal sensitivity analysis mapping crossed with human stakes mapping for the 11 countries from Mauritania to Benin, providing an understanding of these two risk components. Each country has also produced a national diagnostic study. The situation in the most critical sites has been explored and characterised through specific case studies,

conducted by national research teams. The study leads to precise recommendations for the implementation of a regional mechanism for the governance and prevention of coastal risks. The outlook is included in a 3-tier programme, in compliance with the priorities of the Hyogo Framework for Action:

PROTECTING AND PLANNING FOR THE FUTURE: the coastal protection part carries the general guidelines applicable to coastal development and the preservation of natural green infrastructures and ecosystems (mangroves, coastal wetlands, underwater seagrass beds, coastal sediment reserves, etc.). This part also includes coastal protection infrastructures, where these are justified by the issues at stake and are subject to the appropriate impact studies.

MONITORING AND VIGILANCE FOR ANTICIPATION: the long-term shoreline monitoring part requires the setting up of a regional coastal observatory, which will be placed under the aegis of the Ecology Monitoring Centre (CSE) in Dakar. The role of this observatory will be to coordinate the monitoring, observation and analysis of changes of the shoreline in the 176 sectors identified, according to the order of priorities set by the study (which should be updated regularly). This coast watch function will be completed by the monitoring of the effectiveness of existing anti-erosion developments and of regional climate change. The contribution of reference institutions such as ACMAD for climate and the New CSAO (Sahel and West Africa Club) for updating the demo-economic forecasts will be envisaged.

PREPARING AND STRENGTHENING RESPONSE CAPACITIES: the capacity building part aims to merge national scientific and technical resources, and to report regularly to the political decision-makers and coastal actors on changes in the situation and risks related to the coastal areas. The networking of this system with the scientific resources of IUCN's global network is part of this perspective.

PUBLICATION OF FINDINGS

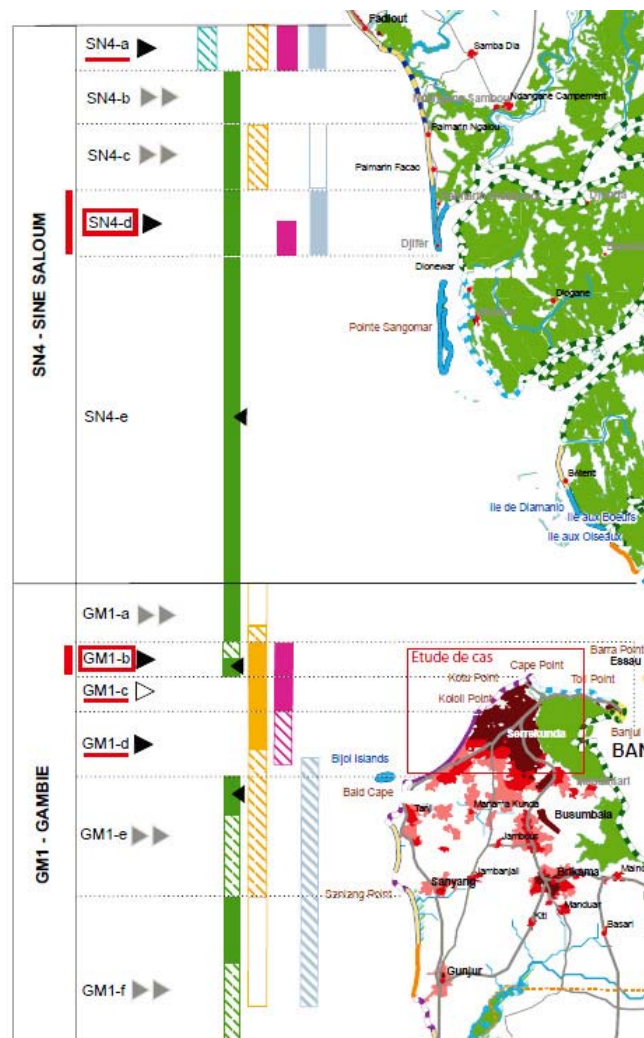
The study is currently being finalised, and the provisional findings were validated by the Regional Scientific Committee of UEMOA which met in Senegal on the 29th and 30th of September. These results will be available before December 2010 on the websites of UEMOA and IUCN/PACO:

<http://www.uemoa.int/>

http://www.iucn.org/fr/propos/union/secretariat/bureau_x/paco/.

In a transition phase, they will also be available online from the following website:

<http://www.climateandcoast.com>.



Extract from the management scheme mapping, (coastal urban areas have been mapped from high resolution images with an indication of the density of urban complexes).

176 sectors: the development scheme divides the coastal area into 176 sectors. For each of these sectors, priorities are identified in terms of:

- ⇒ Intervention and protection requirements
- ⇒ Thematics (risks to equipment and human settlements, planning of coastal development, coastal agriculture, biodiversity and tourism)
- ⇒ Monitoring and vigilance.

For any additional question regarding this study, the possibility of replicating the methodology in other regions, or to receive updates on the publication of findings, join the distribution list by sending a message to the following address: sdlao.uemoa@gmail.com

