

## COASTAL EROSION IN ABIDJAN EREAS COTE D'IVOIRE

### Model study for a sustainable use of the coast

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Located in the South of the city of Abidjan (Côte d'Ivoire, West Africa), the Port-Bouët bay includes the submarine canyon called "Trou-sans-Fond", which corresponds to a change of the coastline direction. Coastal retreats, more or less important depending on the period and the area, are mainly the consequence of permanent wave action, and of the presence of the canyon. This canyon comprises instable steep slopes high subject to landsline.

To chose permanent adequate solution allowing the mitigation coastal erosion phenomenon, a sedimentological model was realized.

It had been realized in a rectangle area of  $650 \text{ m}^2$ , on 1/300 horizontal scale and a scale in height of 1/110. The validity of the model had been checked by a reference trial, short period trials and trials in storm period.

The results of the model study have shown that the utilization of non-submersible breakwaters is more appropriate as a mean of protection in the area. Nevertheless, this solution seem very costly for the local Government.

Solutions based on artificial sediment transfer (**bypassing**) seems to be also suitable for the region but are in a whole costly.