

Recent evolution of the coastline in the Gulf of Guinea. Example of Togo and Benin (2000-2016)

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KEYWORDS: — Shoreline erosion; maladaptation; population displacement; West Africa.

ABSTRACT: — The land-sea interface is an extremely fragile environment. On a global scale, coastlines are threatened by a multitude of factors sometimes natural and mostly anthropogenic (ANTHONY *et al.*, 2014). Thus, in addition to the disruptions to coastal areas by port facilities, dams, sediment sampling on the beach or urban sprawl, there are the consequences of climate change, including rising sea levels (HINKEL *et al.*, 2014). Studies conducted in West Africa show important shoreline erosion processes in recent years with many socio-economic consequences (CHOKPON *et al.*, 2017; COMOË & OZER, 2017; OULD SIDI CHEIKH *et al.*, 2007; OZER, 2014; OZER *et al.*, 2017). The objective of this study is to assess recent trends (between 2000 and 2016) of the coastline in Togo and Benin where more localized studies show that sandy beaches are experiencing major changes (accretion or erosion) in recent decades. Coastal dynamics are analyzed using very high spatial resolution images available in open access on *Google Earth*; the coast is studied by section of 1 km on a coastline of 170 km (pk1 to pk170) by calculating the average change in meter per year since 2000. Analysis of coastal Togo and Benin shows that only 34% of the coastlines (often protected) are stable and that accretion is recorded only upstream of harbor infrastructures (14%). Elsewhere, coastlines undergo erosive processes (52%), sometimes exceeding annual average retreats of 10 m / year. In such conditions, villages have disappeared during the past decade and a large number of people have been displaced. This population needs assistance and should be protected by different legal instruments, including the Kampala Convention (GEMENNE *et al.*, 2017).

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