

The Guiers Lake (Senegal River Delta): Climate change, socio-hydrological, environmental transformations and overexploitation of a limited resource (Oral)

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ABSTRACT

Located in the Senegal River delta, Lake Guiers is the country's largest surface freshwater reserve. It occupies a narrow depression 50 km long and up to 7 km wide, with an average depth of 1.30 m, classifying it as a flat Sahelian lake. Connected to the Senegal River via the Taoué Canal, it is thus dependent on the evolution of the river. The development of the Senegal River basin, undertaken in a specific climatic context, has significantly impacted the hydrological and geochemical evolution of Lake Guiers. The lake provides a multitude of crucial ecosystem services, such as supplying drinking water to Dakar and its surrounding areas, irrigating agro-industries and small-scale vegetable farms nearby, and supplying water to the Ndiaël reserve and the Lower Ferlo region. However, these multiple competing uses, which are developing around the lake, result in various social, economic, and environmental impacts. Despite its significant potential, the populations living near the lake remain deeply impoverished, mostly living in precarious sanitary conditions, often without access to drinking water or adequate sanitation systems. Additionally, the invasion of the shores by aquatic vegetation jeopardizes the ecological balance of the entire region, making certain activities, such as fishing, impossible. Today, serious reflection is required regarding the overexploitation of the resources of Lake Guiers, a strategic wetland for Senegal.

Keywords: Aquatic vegetation; Drinking Water; Irrigation; Overexploitation.