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## **Inland Fisheries and Risk of Contamination of Fisheries Ecosystems in the Gbaga Lagoon Channel (Benin-Togo Coastal Zone)**

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*Coastal areas are areas where a very large number of laguno-marine species reproduce, grow or transit, which are most often the subject of fishing exploitation. The purpose of this study is to analyse the risk of contamination of fisheries ecosystems and its consequences on the evolution of aquatic resources in the coastal zone and more specifically from south-west Benin to south-east Togo.*

*The methodology adopted is based on the collection and processing of raw data such as: hydrometric data, particle size data, climatological data, data from fauna and flora inventories, supplemented by those from in situ measurements and those from laboratory analyses made from sediment samples and some species caught during fisheries during the different hydrological seasons.*

*Analysis of the results revealed that pollution of the lagoon channel in Cd, As, Pb and some major ions such as Cl<sup>-</sup>, NO<sub>3</sub><sup>-</sup> and PO<sub>4</sub><sup>3-</sup> are responsible for its eutrophication. In addition, organic matter and MES in high concentrations lead to the covering of aquatic habitats, particularly spawning grounds and suffocation of eggs by reducing essential metabolic exchanges (supply of oxygen and nutrients, evacuation of metabolic waste) through the decrease in the concentration of dissolved oxygen within the substrate. Analysis of trace elements in the flesh of samples of Captain fish (*Polydactylus quadrifilis*), white grouper (*Epinephelus aeneus*), *Tilapia zillii*, and white catfish revealed their rate of contamination with metallic trace elements. Behavioural effects (abandonment of shelter areas and avoidance reaction) are thus recorded; sublethal effects (short-term reduction in feeding rate; minor physiological stress; increased cough frequency; increased breathing rate; moderate physiological stress; major; delayed outbreak; reduction of population density; mortality). According to 89% of fishermen, the decline in fish species caught is recorded during dry periods, when the channel has a high rate of contamination with heavy metals and major ions.*