



AWATOX: Ecotoxicological survey around the peninsula of Dakar, combining sediment ecotoxicity, water column microbiological, trace metal, physico-chemical and microplastic analysis

Amidou SONKO^{1,*}, Patrice BREHMER^{2,3}, Ibrahima Cisse³, Amy Gassama Sow⁴, Guillaume CONSTANTIN de Magny⁴, Jean Christophe HENRY⁵, Cheikh Diop¹ and Mariline DIARA⁷

¹Université Cheikh Anta Diop (UCAD), Dakar BP 5005 Dakar-Fann, Senegal

²Institut de Recherche pour le Développement (IRD), UMR 195 Lemar, BP 1386 Dakar, Senegal

³Institut Sénégalais de Recherches Agricoles (ISRA), Centre de Recherches Océanographiques de Dakar - Thiaroye Oceanographic (CRODT), BP 2241, Dakar, Senegal

⁴Institut Pasteur, Avenue Pasteur, Dakar BP 220, Senegal

⁵Association Océanium, Corniche EST, Dakar, Senegal

⁶Ministère de l'Environnement et du Développement Durable (MEDD)/ Direction de l'Environnement et des Etablissements Classés (DEEC) 106, Rue Carnot - BP 6557, Dakar, Senegal

*Correspondance: Tél: (+221) 70 765 04 90; Courriel: amidousonko664@yahoo.com (A. SONKO)

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Abstract

A few decades ago, Senegal was a model for the sub-region with a drainage system connected to wastewater treatment plant. These infrastructures have been deteriorated and the country (especially the capital) is experiencing rapid population growth, urban planning and industrial development that are difficult to control. Industrial, fishing, agricultural activities and the massive discharge of domestic/industrial waste in nature are the major anthropogenic sources of marine pollution (sediment, water, flora and fauna). This pollution is likely to have negative effects on ecosystems by contaminating seawater, sediments, aquatic benthic species and pelagic species. Products derived from fishing activities for human consumption and animal feed may also present a health risk because of the presence of contaminants. This study aims to evaluate 10-15 areas around the peninsula of Dakar where waste waters are discharged. The proposal is to evaluate sediments ecotoxicity, microbiological contamination, physico-chemical water quality and to combine it with marine microplastics (> 200µm) analysis. For microbiological analysis, fecal contamination indicators and pathogenic bacteria (including *Vibrio spp.*) will be checked. Physico-chemical parameters will focused on trace metal elements and at final step the abundance of microplastic will be evaluated. The results of the study will be used for public awareness and for stimulating a regular monitoring at the national level for human health and marine ecosystem conservation.



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Extended book of Abstract

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