

EVIDENCE OF CONTAMINATION CAUSED BY SUGAR-CANE
MONOCULTURE AND ASSOCIATED INDUSTRIAL ACTIVITIES
IN WATER BODIES OF THE STATE OF PARAIBA,
NORTHEAST BRAZIL

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ABSTRACT

Analyses of inorganic nutrients, dissolved oxygen, Biochemical Oxygen Demand (BOD), faecal coliforms, and total and fermentative yeasts were carried out in different sectors of representative aquatic ecosystems of the sugar-cane agricultural zone of the State of Paraíba's littoral region. High concentrations of yeasts, low values of dissolved oxygen, and high levels of BOD, observed in the vicinity of a distillery, and a constant presence at high concentrations of fermentative yeasts along the Paraíba do Norte River estuary provide direct evidence of contamination of this environment by vinasse and/or wastewaters. High values of nitrate at the head of the Açu River and at the reservoirs of the Gramame and Mamuaba rivers provide indirect evidence of the contamination of these ecosystems by chemical fertilizers used on adjacent sugar-cane plantations. The presence of fermentative yeasts along the Açu River, usually in relatively high concentrations, also suggests the influence of these crops.