

FROM MANGROVE TO FORK: METAL PRESENCE IN THE GUAYAS ESTUARY (ECUADOR) AND COMMERCIAL MANGROVE CRABS

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Mangrove wetlands provide essential ecosystem services such as coastal protection and fisheries. Metal pollution due to industrial and agricultural activities represents an issue of growing concern for the Guayas River Basin and related mangroves in Ecuador. Fisheries and the related human consumption of mangrove crabs need scientific support. To protect human health and aid river management, we analyzed several elements in the Guayas Estuary. Zn, Cu, Ni, Cr, As, Pb, Cd, and Hg accumulation were assessed in different compartments of the commercial red mangrove crab *Ucides occidentalis* (hepatopancreas, carapax, and white meat) and the environment (sediment, leaves, and water), sampled at fifteen sites over five stations.

Consistent spatial distribution of metals in the Guayas estuary was found. Nickel levels in the sediment warn for ecological caution. The presence of As in the crabs generated potential concerns on the consumers' health, and a maximum intake of eight crabs per month for adults is advised. The research outcomes are of global importance for at least nine Sustainable Development Goals (SDGs).

The results presented can support raising awareness about the ongoing contamination of food and their related ecosystems and the corresponding consequences for environmental and human health worldwide.

