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Dredging operations in a subtropical urban estuary: Effects on population structure of benthic macrofauna inhabiting river margins

Tito Cesar Marques de Almeida and Pedro Rocha Mattos
UNIVALI-Universidade do Vale do Itajaí, Brazil

Little is known about the effects of dredging activities upon indirectly affected areas like river margins. On an urbanized subtropical estuary in southern Brazil, benthic macrofauna was sampled throughout two dredging events on control and impacted areas. Granulometry and river discharge were also accessed. Univariate PERMANOVAs with five factors (Time, Area, Event, Station, Sector) were applied on Euclidean distance matrices of abundances for the most representative taxa (*H. similis*, *H. australis*, *K. schubartii*, *N. fluviatilis*, *Polydora* sp. = 91% total abundance) to test the null hypothesis of no differences in population densities upon dredging. Results evidenced small scale disturbances, indicating that dredging along with environmental variations affects studied populations; effects differ between the two margins and the resilience times range from 3 to 9 months. Greatest overall abundance was recorded during dredging operations, when river discharge readings showed the lowest values, indicating that dredging should be performed during periods of low river discharge.

Biography

Tito Almeida has completed his PhD at the age of 37 years from Federal University of Sao Carlos – Sao Paulo/ BRAZIL and postdoctoral studies from UNIVALI. He is Associated Professor of UNIVALI since 2001 and responsible for the Community Ecology Laboratory. He has published more than 26 papers in reputed journals and has been serving as an editorial board member Brazilian Journal of Environmental Technology.

pedro.mattos@terra.com.br